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ORIGINAL ARTICLES.

PRELIMINARY STUDY OF THE RELATIONS BETWEEN THE ERUPTION OF THE PERMANENT TEETH AND THE AILMENTS OF LATE CHILDHOOD.

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The eruption of the *milk teeth*, though physiological, is so uniformly regarded as dangerous, that both physicians and parents congratulate themselves when infants under their charge pass through this process without trouble, or safely weather the various diseases that may arise during its course. The interval between the seventh and twenty-fourth months of an infant's life—the period of primary dentition—is an era of great and widely extended physical progress. The teeth are advancing; the follicular apparatus of the stomach and intestinal canal is undergoing development in preparation for the digestion and absorption of mixed food; the cerebro-spinal system is rapidly growing and functionally very active, and the organs and tissues of the whole body are in a state of active change. This period of normal transition must also be one in which there is great susceptibility to abnormal change, or disease, provided there be a causal influence at work. Such an influence may either originate outside of the body, as when there is exposure to cold, or to contagion, or come from within in the form of some perversion of a physiological process.

Difficult dentition stands prominent in the latter class. During it, irritation of the gums very often produces stomatitis with fever, and the fever in time leads to enfeebled digestion and impaired nutrition, conditions that open the way to catarrh of the mucous membrane of the bronchial tubes and gastro-intestinal tract, and to other intercurrent affections. Again the local irritation may be reflected through the widely extended connection of the dental nerves, and give rise to well-known disorders of distant organs, and tissues, for example, the brain, eyes, stomach, skin, and so on.

With these conditions fully recognized it is surprising that second dentition has not been accorded the position it deserves, as a cause of ill-health in later childhood. In second dentition the elements of local irritation with fever are quite as potent as before. There is, however, less activity of development or rapidity of change, if we except the radical alteration in the system occasioned by the approach of puberty. Therefore there must be less susceptibility to disease, and this fact, taken with the greater resisting power of advancing age, fully accounts for what every observer will find to be true, namely, that the disorders of this period are less frequent and less dangerous than those that attend the cutting of the milk teeth. Nevertheless the etiological relations of the eruption of the permanent teeth will fully repay a careful study.

In the present paper, the subject will be considered only in its relation to the time between the fifth year and the establishment of puberty, when childhood is over, and youth or maidenhood begins.

The permanent teeth are cut in the following order:

(1) Four first molars, five to six years.
(2) Four central incisors, six to eight years.
(3) Four lateral incisors, seven to nine years.
(4) Four first bicuspids, nine to ten years.
(5) Four second bicuspids, ten to twelve years.
(6) Four canines, eleven to thirteen years.
(7) Four second molars, twelve to fourteen years.
(8) Four posterior molars (or "wisdom teeth," not entering into this study), seventeen to twenty-one years.

Of the twenty-eight teeth cut within the period already mentioned,—the fifth to the fifteenth years—the first and seventh sets are developed *de novo*, and are more likely to give rise to trouble, particularly of the oral mucous membrane. The other sets take the place of corresponding milk teeth, and appear in very much the same order, the lower central incisors appearing before the upper, the upper lateral incisors before the lower, the upper bicuspids before the lower, etc.*

As these teeth approach the surface, absorption begins in the alveoli and at the roots of the deciduous teeth, and this continues until the teeth are loosened and readily extracted, or if this be not done, until little is left but their crowns.

When the first and second molars approach the surface, the gums, just as in primary dentition, become red, swollen, rounded and tender. The salivary secretion is increased, the mouth is hot, the patient complains of aching in the gum, and, on account of tenderness, refuses food requiring mastication. With the other sets there is a gradual loosening of the superimposed temporary teeth, pain on mastication, redness and tumefaction of the gum, and augmented flow of saliva. As there is no impairment of the general health, these trifling symptoms must be regarded merely as manifestations of the progress of a physiological process. Such are the normal manifestations.

The most common disorders of second dentition, are (*a*) those of the mouth and throat; (*b*) of general nutrition; (*c*) of the stomach and intestinal canal; these, only, will be considered at present. Other affections often encountered are those of the skin; of the cervical lymphatic glands; of the eyes; of the ears; of the lungs; and of the nervous system.

(*a*) Oral pain is often intense. It is lancinating or neuralgic in character and may either be limited to the position of the advancing tooth or extend throughout the upper and lower jaws —the region supplied by the dental branches of the trifacial nerve. Sometimes the pain is referred to the eye, the ear, the face, or even to the forehead. Pain associated with tenderness most frequently attends the eruption of the first molars; then there is also redness and marked swelling of the gum, as in primary dentition.

The redness and swelling about an advancing tooth or around a loosened milk tooth may, in debilitated or strumous subjects, extend to the mucous membrane of the whole mouth and give rise to catarrhal stomatitis. Again, as one of the first or second molars advances, the mucous membrane of the gum, directly over the tooth breaks down and a circular ulcer is formed. This ulcer possesses all the characteristics of the marginal ulcer of ulcerative stomatitis, and is very liable, provided such favoring conditions as scrofula, over-crowding and bad hygiene exist—to run around the alveolar border, and extend to the inside of the cheek. A case has recently been under my care, in which all of the six year molars were cut in this way, the resulting ulcerative stomatitis producing considerable discomfort, but yielding readily to treatment.

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*For order of eruption of milk teeth, see "STARR: Diseases of Digestive Organs in Children," page 86.

Superficial ulcers upon the edges and tip of the tongue are often encountered. These ulcers correspond in position and number to loosened and perhaps decaying deciduous teeth; are due to constant irritation of the mucous membrane; are the seat of moderate pain, and more or less interfere with the movements of the organ in mastication and speech. They vary in shape and size but are generally oval, with the greater diameter—rarely more than half an inch—extending in the direction of the axis of the tongue. Their bases are smooth, red and shining, and their edges red, indented, somewhat indurated and surrounded by a narrow band of white fur formed upon the neighboring healthy epithelium.

A boy, ten years old, was recently brought to consult me about the condition of his tongue. Nearly two months before the anterior deciduous molars had commenced to loosen. Soon after two ulcers appeared upon the tongue at points corresponding to the loose teeth in the lower jaw. These caused considerable discomfort and interfered with the movements of his tongue. Six weeks later the four loose teeth were extracted. At the time of his visit the points of the permanent teeth were distinctly visible. The ulcers, which presented the characteristics already described, were present, too, but they were much contracted and evidently in process of healing. This case is a clear illustration of the etiology of the condition, and of the rapid effect of the removal of the cause.

Loss, or perversion of taste, depending upon reflected irritation of the gustatory and glosso-pharyngeal nerves, has occasionally arisen in my experience. It is a feature that may be readily overlooked in childhood, and without doubt has never received due credit as a cause of the anorexia so often observed during second dentition.

Of throat affections, simple hypertrophy of the tonsils and follicular tonsilitis seem particularly apt to arise in late childhood. The extension of catarrhal inflammation from the mouth to the throat is certainly an element in the causation of the conditions, though anorexia, imperfect digestion and fever are more potent, as they lead to impaired nutrition and increased susceptibility to the action of cold and bad hygienic surroundings.

The treatment of this class of affections must vary with the symptoms presented. Should there be much inflammation and pain about a loose tooth, great relief can be obtained by painting the gum three or four times daily with a solution of:—

℞.	Cocaine hydrochlorate	gr. iv.
	Glycerinæ	fʒii.
	Aquae, q. s., ad	f℥i.
M. S.	For local use.	

When the first or second molars cause the trouble, free lancing with an oblique crucial incision, is to be recommended. Much good can also be done in the way of softening the gums and lessening pain by a thorough application of:—

℞.	Zinci chloridi	g. i.
	Vin. opii	fʒi.
	Glycerinæ	fʒii.
	Aquæ rosæ, q. s., ad	f℥i.
M. S.	Apply to tender gums with a brush or soft cloth thrice daily.	

Such measures, too, will be more successful in relieving referred pains than any direct application to the place of reference.

Catarrhal and ulcerative stomatitis demand the usual methods of treatment.

Superficial ulcers on the tongue can often be healed by a daily application of a solution of nitrate of silver (ten grains to one fluid-ounce) and the frequent use of a borax or chlorate of potassium wash (fifteen grains of either to one fluid-ounce). Should there be much pain and discomfort, the solution of cocaine recommended above may be used two or three times daily. When the deciduous teeth are decayed, however, nothing short of their extraction will cure the ulceration.

Nothing can be done for loss or perversion of taste except removing loose teeth and freely lancing the gum over advancing molars.

Hypertrophy of the tonsils and follicular tonsilitis must be treated in the same way as when they occur independently of dentition, the question of the propriety of extraction and of lancing being always borne in mind.

(*b*) After safely passing through primary dentition children usually grow robust and enjoy good health, unless they be attacked by some one of the acute contagious diseases to which their age is liable. This state of affairs may happily endure throughout the remainder of childhood, but it is often supplanted, during the sixth and following years, by a condition best described as one of "general debility."

This ill-health is neither produced by disease of important viscera, as of the lungs, heart, kidneys and digestive organs, nor can bad hygiene be blamed in many cases. For the explanation one must look rather to an impairment of nutrition, resulting from the constitutional strain of cutting the second teeth, from the moderate fever associated with the process, and from the diminished consumption of food, attending oral discomfort and painful mastication. The severity of the symptoms depends somewhat upon the general vigor of the subject, though in my experience it bears little or no relation to the difficulty or ease of cutting the milk teeth.

Early in the sixth year, children so affected begin to lose their rosy cheeks; the lips grow pale; the skin of the body becomes sallow and harsh; the hair dry and lustreless, and there is moderate loss of flesh with flabbiness of the muscles. The face wears an anxious expression and the temper is unstable; by day frequent complaints of weariness are made and little interest is taken in play, while at night sleep is restless and there is often slight fever. Pain and discomfort in the mouth are constant symptoms and as these are increased by mastication, there is apparent anorexia. Examination of the mouth reveals redness, swelling and tenderness of the gums over advancing molars, or if these have been cut, around loose temporary teeth. The bowels are inclined to constipation and the urine limpid and voided in abundant quantity; the pulse is rather feeble though normal in frequency, and, as a rule, there is no cough nor other alteration in the respiratory function. Careful investigation shows an absence of lesion in the heart, lungs or kidneys, and of disease of the abdominal glands or digestive tract. As the teeth of the advancing group are cut, the symptoms disappear, to return with the approach of each succeeding group, but the anterior molars generally give rise to more marked disturbance than any of the teeth that replace the temporary set.

In addition to the ordinary risk of intercurrent disease, existing in every case of general debility, the condition just described is very apt to be complicated by bronchitis or catarrh of the gastro-intestinal canal. Pyrexia, although it is comparatively slight in second dentition, accounts for this, for a feverish child is very susceptible to cold, and very liable to have his digestion disorded by food upon which he has previously thriven. The first cause, by driving the blood from the surface, produces bronchitis; the second, by direct and indirect irritation, leads to catarrh of the mucous membrane of the stomach and bowels.

This knowledge taken in connection with the course and history of the case and the condition of the mouth, should enable the observer to attribute the illness to its proper source rather than to any complicating affection although the latter undoubtedly accentuates the symptoms, and may force itself into prominence. The negative results of physical exploration of the heart, lungs, and abdominal organs,—particularly the mesenteric glands—and of examination of the urine, are also important in establishing the correct relations of cause and effect.

Careful regulation of the diet and the administration of tonics, the methods of treatment that would naturally be suggested, are of little avail, unless oral pain and difficulty of mastication be relieved. Even then, it is often impossible, to do more than maintain a moderate degree of health until advancing teeth are completely free.

Free lancing of the gums over molars, the application of cocaine to painful gums surrounding loose temporary teeth; the extraction of these when the substituting teeth are so advanced as to run no risk of impairing the arch of the jaw; regulation of the diet and hygiene, and the employment of tonics and laxatives are the measures to be recommended. The diet must be simple, non-farinaceous and nutritious; it is better to allow four small meals a day than three large ones. Of tonics a good formula is:—

℞.	Tr. nucis vomicæ	♏xij.
	Elix. cinchon. ferrat	fʒvj.
	Syrupi	fʒss.
	Aquæ, q. s., ad	f℥iij.

M. S. Two teaspoonfuls thrice daily at the age of six years.

Syrup of the iodide of iron, bitter wine of iron and an emulsion of cod-liver oil with lacto-phosphate of lime, are also useful. The best laxatives are fluid extract of senna, which may be combined with the tonic mixtures; tincture of aloes and myrrh in small doses three times daily, compound licorice powder, gluten suppositories or laxative tamarinds.*

Bronchitis and catarrh of the gastro-intestinal canal demand active attention and little else can be accomplished until they are relieved.

(*c*) Disorders of the digestive system, while unattended by such marked symptoms and rarely reaching the same degree of danger as in primary dentition, are among the most common of the disturbances produced by the eruption of the second teeth.

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*See "STARR: Diseases of Digestive Organs in Children," page 211.

One cause of this is the intimate sympathy existing between the different portions of the digestive tract, and leading to reflection of irritation from point to point. Another and more active cause has already been indicated. It involves two conditions. First, general depression of vitality—from constitutional strain, fever, and so on—with a corresponding weakening of the function of digestion, so that food previously suitable and easily assimilated, becomes relatively too coarse and "strong" and being more or less imperfectly changed and absorbed, lies in the alimentary canal undergoing fermentation and decomposition with the formation of irritant acids and gases. Second, the well-recognized susceptibility of the gastro-intestinal mucous membrane to become inflamed, or to assume the catarrhal state, when subjected to the action of irritants. A susceptibility decided enough under the best of circumstances, but intensely marked if the general health and resisting power be below par.

Anorexia, vomiting, acute gastric catarrh, chronic gastro-intestinal catarrh, and diarrhœa are the more common of the digestive disorders attending second dentition. Loss of appetite when not due to perversion of taste, generally forms but one member of a group of symptoms depending upon catarrh of the stomach, and can be best studied under this head. The same may be said of vomiting. Of each of these symptoms it is also true, that they may be so prominent as to mask the associated features unless the observer be very careful.

Acute gastric catarrh, in so far as it is related to second dentition, is most frequently encountered during the eruption of the six year molars. The attack of so-called "biliousness" and "indigestion," may or may not be preceded by some indiscretion in diet. Very often without any departure from ordinary rules the mother notices that her charge becomes listless, has a hot, dry skin, loses appetite, is thirsty, complains of headache, abdominal discomfort and nausea, and sleeps uneasily. Soon there is vomiting of sour-smelling imperfectly digested food; followed by painful retching with the expulsion of small quantities of bile-stained mucus. Next the tongue becomes covered with a thick yellowish-white fur, and the breath has a heavy sour odor. There is decided elevation of temperature (99° to 101° Fahrenheit); the pulse is increased in frequency (110 to 120); the bowels are confined and the urine diminished in quantity and lateritious. Tenderness of the epigastrium is generally noticeable. The attack may terminate suddenly, at the end of twenty-four hours, with several loose fæcal evacuations, or convalescence may extend over a period of three or four days; the fever gradually subsiding, nausea and thirst disappearing, the tongue clearing and appetite returning.

The temporarily enforced fast and the light diet indicated for a few days after such an attack insure immunity from future trouble for a short time, but as long as the molars are working their way through the gum, an error in diet or even a return to ordinary food, may occasion a relapse. It will fully repay the physician to inspect the mouth of every six year old patient (and upwards) suffering from acute indigestion, and after making the examination thoroughly to lance swollen gums over advancing molars, and apply soothing lotions to irritated gums about loosened temporary teeth or order extraction if admissible.

General treatment must be conducted on the same plan as when the attacks, as is often the case, occur independently of dentition. The important points are careful regulation of the diet, or the withholding in bad cases of all food for twenty-four hours; counter-irritation to the epigastrium by sinapisms; the use of ice and iced Vichy water to relieve thirst, and the employment of remedies calculated to check nausea, and at the same time act gently on the bowels. A favorite method with the writer is to divide the elements of a Seidlitz powder into equal parts, say eight for a child of six years, dissolve a portion from each in a tablespoonful of cool water, pour together, add cracked ice, and administer while effervescing.

The well-known combination of calomel and soda is also very efficient, for instance:—

℞.	Hydrarg. chloridi mit........................	gr. i.
	Sodii bicarb..	gr. vi.
	Sacchari...	gr. xxx.

M. et ft. chart. No. vi. S. One powder every two hours until all are taken, or until the bowels act freely.

It is difficult to display too much caution in returning to a full diet, and in spite of the protestations of parents extreme moderation should be the rule until local irritation be relieved.

Chronic gastro-intestinal catarrh owes its origin to second dentition more frequently than to any other cause save whooping-cough. In this condition—so aptly termed by Eustace Smith, "Mucous Diseases"—there is a mucous flux from the whole internal surface of the alimentary canal, which mechanically interferes with the digestion and absorption of food and greatly impedes nutrition. It may be met with at any time during the eruption of the permanent teeth.

The affected child is emaciated and weak. His face is pale, though subject to marked changes in color. At times a circumscribed crimson flush appears on one or both cheeks; again, there is so much pallor, particularly about the lips, that fainting seems imminent. The eyes are surrounded by bluish circles, that deepen when the face pales; the conjunctivæ are muddy and there is occasional squinting. The skin is sallow, dry, and rough, the hair lustreless and faded. There is decided pallor of the oral mucous membrane; the tongue is flabby, indented by the teeth, and glazed, and the breath is heavy and fetid. The appetite in the beginning fails, then becomes capricious, and, finally, is almost insatiable. Eating is followed by a sensation of drowsiness, and by eructations of flatus and acid liquid.

Tympanitic distension of the belly and pain are always present. Pain may be general, when it amounts to little more than a sensation of soreness, or, more frequently, it is limited to the left hypochondrium, and then is stitch-like in character. Either variety may be constant or present only after meals; in the former case there is a temporary increase of discomfort after eating. Paroxysms of severe pain about the umbilicus with great pallor of the face are sometimes observed.

Constipation of the bowels is usual, and the evacuations, which take place at intervals of two or three days, are scanty, and composed of small, hard, dark-colored lumps, with a quantity of mucus. By day the patient suffers from headache; is languid and ill-tempered. At night he is restless, grinds his teeth; starts from sleep in terror caused by frightful dreams, screams or laughs incoherently and for a time seems unconscious of his surroundings. Somnambulism and nocturnal incontinence of urine are quite common.

There is no alteration of the temperature; the pulse is feeble, and there is frequently a slight, dry hacking cough, unquestionably due to reflex irritation of the larynx. The urine is diminished during the continuance of severe pains, but is voided in large quantities at the termination of the paroxysms.

At intervals of two or three weeks, violent vomiting and purging occur. During these artacks, which last from one to three days, a large quantity of mucus is expelled; there is slight fever, and the tongue becomes less flabby, more pointed, and covered with a thick white feathery fur, except along the sides, where several smooth, red, glazed patches of variable size and shape, with irregular indented margins, appear. The cleaning-out process is followed by temporary improvement, but the symptoms slowly return and grow worse to culminate in another attack.

The course of mucous diseases is very protracted, extending over months, and whilst there is no regular progression, the symptoms tend to grow more and more severe as time lapses.

Hacking cough, emaciation and debility may suggest tuberculosis. A diagnosis, however, can be readily made by noting the state of the tongue; the mucous stools; the color and condition of the skin; the absence of pyrexia, except in the attacks of vomiting and purging; the periodicity of these attacks; the diurnal drowsiness and nocturnal terrors, and the irregularity of the course. At the same time, the onset of the symptoms, after the commencement of second dentition is a point of importance.

Mucous disease is not dangerous in itself, though by reducing the strength it predisposes to other and much more fatal diseases.

After removing oral irritation so far as possible, there are several rules of management to be enforced. First, all articles of diet that readily undergo fermentation must be withheld, and food should be given in moderate quantities and at shorter intervals than in health, so that while the stomach is at no time over-distended, enough nourishment may be ingested. Of permissible articles, milk, eggs and lean meat are the chief, though fresh fish, raw oysters, cauliflower tops, spinach, asparagus, lettuce, and stewed celery can be used without ill-effect. With such a list to select from, it is an easy matter to write out a suitable dietary and to make changes sufficiently often to avoid cloying the appetite by monotony. Filtered water or Vichy should constitute the drink, except there be great debility when whiskey or old dry sherry are useful; they must be well diluted and given in carefully proportioned doses with the meals.

Next the activity of the skin must be maintained by general baths, followed by inunctions of olive-oil, and by keeping the surface carefully covered with woolen underclothing. Finally, exercise in the open air on suitable days in winter, and an almost complete out-door life in summer, greatly favor recovery.

Medicinal treatment is of minor import, but by no means to be neglected. The indications are to check the secretion of mucus; to neutralize the irritating acids formed by fermentation of the food; to restore the mucous membrane to a normal condition, thereby improving secretion, digestion and appetite; and to secure regular action of the bowels and the expulsion of collected mucus and fæces. These ends accomplished, strength and health return, though it may be necessary to call in the aid of tonics.

Alkalies are the best remedies to check the secretion of mucus, and to liquefy it so that it may the more readily be removed. They are also most efficient in neutralizing the acid products of fermentation. Simple bitters, too, have some power in lessening the formation of mucus, and considerable influence in arresting fermentation; at the same time they give tone to the mucous membrane, and stimulate digestion. Laxatives keep the bowels clear. Of the first class, bicarbonate of sodium; of the second, gentian and columbo; and of the third, senna or aloes are to be preferred.

A very serviceable prescription is:—

℞. *Potassii iodidi	gr. vi.
Sodii bicarbonatis	ʒj.
Extract sennæ fed	fʒiij.
Inf. calumbæ, q. s., ad	f℥iij.

M. S. Two teaspoonfuls three times daily before eating, for a child of six years.

After food, it is well to order from ten to twenty drops of tincture of aloes and myrrh in a little water, for its powerful tonic action on the intestinal mucous membrane. Should tonics be needed in the after treatment tincture of nux vomica and ferrated elixir of cinchona are the best. In order to prevent a relapse, mixed diet must be avoided for at least two months after convalescence is fully established, and to confirm the cure, a change of air, by a trip to the mountains or sea-shore, is advisable.

Diarrhœa is a very constant attendant upon second dentition. It is most apt to arise in the changeable weather of spring and autumn or in the heat of July, August or September. In this respect it resembles the diarrhœa so common with primary dentition, but unlike the latter, it shows little or no tendency to run into entero-colitis. Two forms are met with, namely catarrhal diarrhœa, and lientary. Catarrhal diarrhœa is accompanied by slight furring of the tongue loss of appetite and abdominal pain of a colicky nature. The evacuations are frequent, light yellow in color and offensive, semi-solid or liquid. For the relief of these cases, all that is required, beyond attention to the mouth, is a bland diet, perhaps a dose of castor oil, and some mild astringent mixture. For example let the patient take for breakfast, a soft boiled egg, milk with lime-water, and stale, dry bread; for dinner, some meat broth (free from fat), stale, dry bread, and rice and milk pudding; for supper, milk and stale, dry bread. After the dose of oil, to be given when pain is marked, a good astringent mixture is:—

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*The iodide of potassium is used to increase the activity of the salivary and gastro-intestinal glands.

℞.	Tr. opii deod	♏xij.
	Bismuth. sub-nitratis (Squibb)	ʒi.
	Syrupi	f℥ss.
	Mist. cretæ, q. s., ad	f℥iij.

M. S. Two teaspoonfuls every two hours.

The treatment may terminate with a course of wine of pepsin or of pepsin with dilute muriatic acid.

Lientary depends upon great irritability of the intestine and exaggerated peristalsis. The stools are limited to four or five a day, and are composed of almost completely undigested food and mucus. An evacuation occurs in the morning, soon after rising; the others during or immediately after meals. They are preceded by griping pain and by so urgent a desire, that the little sufferer has difficulty in waiting for the chamber or reaching the closet. Nux vomica followed by arsenic are the remedies to be employed. For instance, until the stools become less frequent and urgent and the griping pain diminishes, a good prescription is:—

℞.	Tr. opii deod.,	
	Tr. nucis. vom., āā	♏xlviij.
	Aq. menth. pip., q. s., ad	f℥iij.

M. S. One teaspoonful before each meal, at the age of six years.

Afterwards:—

℞.	Liquor. potassii arsenitis	fʒi.
	Inf. gentianæ comp., q. s., ad	f℥iij.

M. S. One teaspoonful after each meal.

Of course, the diet must at the same time be carefully regulated.

The general depression produced by the coming of the second teeth, would naturally favor the development of any constitutional tendency, and, having traced the connection in several instances, I have no doubt that not a few cases of tubercular ulceration of the bowels owe something to this etiological factor.

CLINICAL LECTURES.

ABSTRACT OF REMARKS ON A CASE OF STRICTURE OF THE URETHRA WITH RUPTURE AND EXTRAVASATION OF URINE AND EXTERNAL PERINEAL URETHROTOMY.

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REPORTED BY GEO. A. HENDRICKS, M. D.

This patient was admitted to the hospital yesterday. He is fifty-three years old and by occupation a farmer. Twenty years ago, he says, he had sounds passed to relieve a stricture which was the result of an injury received riding horseback. Since then no sounds have been passed. During this period the stream of urine had been diminishing gradually in size, and for some time it had been so small that it required hard straining to pass his urine, when he would have a severe throbbing and shooting pain in his perineum. For the relief of this he consulted a physician, ten days ago, who gave him some medicine, which he took for two days, when his symptoms became worse and he noticed that his penis and scrotum had become swollen. The swelling increased until he was in even a more deplorable condition when received into the hospital than what you now behold. You see to what an extreme degree his penis and scrotum are distended with urine by its infiltration into the cellular tissue; but this swelling was even much greater when he came here, for it has been draining away for the past twenty-four hours.

The history of this case illustrates the course and the natural termination of stricture of the urethra. In this case the stricture had its origin in a slight injury to the urethra and perineum while riding horseback twenty years ago. That was the one end of the story and here you see the other. In connection with this painful narrative, and unfortunate result, it will be profitable to review some of the principal points in the pathology of stricture of the urethra.

When from a traumatism or lesion of any kind, a stricture of the urethra is once formed, its tendency is to continue to contract. This is in obedience to the law which applies to cicatricial tissue wherever it is formed, but which is best observed where the mucous membrane is involved. The anatomical structures lose their distinctive features, and become a mass of connective or cicatricial tissue.

A neglected stricture is subject to repeated acute attacks, which each time leaves the parts in a worse condition, until the urethra finally becomes diminished to such a degree that it requires severe straining to expel the urine, which comes away in a small twisted or forked stream, or possibly can be voided only drop by drop. When such a condition is reached the tissues involved in the stricture, and the walls of the urethra posterior to or on the bladder side of the stricture, are subjected to great pressure which is a constant source of irritation, giving rise to congestion, swelling and inflammation. The slightest provocation may now lead to complete retention. The tissues subjected to this pressure and irritation become changed in character. They lose their tone and the urethra is dilated behind the point of obstruction. The process of degeneration finally results in suppuration and the formation of an abscess in the cellular tissue external to the urethral mucous membrane. The resistance to the expelling force is now greatly diminished, and the weakened walls of the urethra suddenly yield to the pressure from the efforts made in micturition, and the urine is forced into the cellular tissue, causing infiltration of the scrotum, penis and surrounding regions, or if the abscess opens externally in the production of a urinary fistula.

For a number of years this patient had a difficulty in passing his urine, which at times would become so aggravated that with the greatest effort only a small quantity could be voided. While in this condition he suffered from partial retention, which finally threatened to become complete. He was now attacked with a severe throbbing pain in his perineum, for the relief of which he consulted a physician, who, without exploring the urethra, gave him a mixture, a few doses of which greatly augmented his suffering by increasing the desire to micturate. Certainly nothing could be more unscientific or illogical than the administration of a diuretic under such circumstances. The proper thing to do, which was plainly indicated, was to relieve or remove the primary cause, namely, the stricture. Had that been done in time, the function of micturition would have been properly performed, and the condition of retention removed. The diminished quantity of water passed was not due to any impairment in the secretion of the urine, but was due to its retention, and the diuretic only increased the difficulty. As it was the patient endured intense suffering, and his condition is now one of extreme peril.

The urethra has ruptured posterior to the stricture and extensive extravasation of urine into the subcutaneous cellular tissue has taken place. We have now to meet the urgent symptoms and results to which such a catastrophe invariably give rise. The condition of extravasation of urine is one which demands the most immediate and decided action on the part of the surgeon if the patient is to have any chance for his life. Upon his admission into the hospital yesterday, Dr. Sullivan, appreciating the great urgency of the case, proceeded, at once, to make free incisions through the skin in various directions thereby permitting a large quantity of extravased urine to drain away. He also attempted to empty the bladder by the introduction of a catheter, but after the most careful and persistent efforts it could not be accomplished, and he very properly resorted to aspiration by which means he was able to draw off the urine and afford the patient very great relief.

Under these circumstances I propose to attempt to pass an instrument through the urethra, and if successful, to cut down and perform the radical operation of external urethrotomy, by which means not only will the extravasated urine be allowed freer exit, but the structural lesion, which lies at the bottom of the whole difficulty, will be completely removed. In addition to this, the greatest care must be taken to support the patient's strength by nourishing food and stimulants, and, also, to relieve his suffering by the judicious administration of anodynes.

The patient will be placed under chloroform, and an attempt made to pass Syme's grooved staff through the stricture, as a guide to our incision, which will be made according to the rules laid down, long ago, for performing external perineal urethrotomy by Professor Syme, to whom the profession is indebted for having placed this most valuable surgical procedure upon a sound, practical foundation.

Having without delay performed the operation, I will now describe its several steps.

The staff once passed, the patient is put into the lithotomy position and an incision about an inch and a half in length is made in the middle line of the perineum, through the integument and fascia. The operator now holds the director in his left hand, and with the knife guided over the index finger of the right hand, with the cutting edge directed outwards, the point is inserted into the groove, nearly one inch behind the shoulder, and pushed forward to the notch, when both the staff and the knife being held firmly, are carried outward so as to divide the stricture completely, which can be felt by the giving away of the dense tissue. Large-sized sounds are now to be passed, to make sure that all of the stricture has been divided, and thus insure the patient against a return of his trouble.

This instrument is the grooved staff mentioned. It is made of solid steel. The curved portion is small, not as large as a number one sound, and is grooved on its convex surface. This small curved portion terminates at a sudden enlargement or shoulder, where the shaft begins, which is much larger. Professor Syme taught that no stricture is truly impermeable, and that with time, care and patience, in every case, an instrument can be made to pass through it, and serve as a guide for the knife; and this instrument, as devised by him, never failed in his hands to demonstrate this important truth. I want to caution you, however, that unless care and patience are practiced this instrument can become a dangerous one. To be safe it must be used *without force.*

Notes from Hospital Record.—On admission, fifteen grains of antipyrine were administered; at 12 M. one-eighth grain of morphia by mouth. 1 P. M.—Integument of penis and scrotum scarified. Attempt to pass catheter, but after long and persistent efforts failed. 3 P. M.—Severe chill. 5 P. M.—Thirty-four ounces of urine drawn off by means of aspirator. 6:30 P. M.—Temperature, 95°; pulse, 74.

November 18: 10:20 A. M.—Temperature, 97.7°; pulse, 75. One-sixth grain of morphia hypodermically. 11 A. M.—Operation of external perineal urethrotomy. Chloroform, one ounce. Time on table, thirty-five minutes. 1:30 P. M.—Twenty grains of quinine per rectum. 6:30 P. M.—Temperature, 103.2°; pulse, 125. Ten grains of antipyrine. 9 P. M.—Temperature, 101.2°; pulse, 128. One-sixth grain morphia hypodermically; gentle perspiration.

November 19: 8 A. M.—Temperature, 101.3°; pulse, 122. Some retention of urine, which was drawn off with a catheter and bladder thoroughly washed. Slight slough in incision near end of prepuce. Wounds washed with permanganate of potash solution. 11:30 A. M.—Enema of peptonized beef. 5 P. M.—Enema given, followed by free movement of bowels. Until morning quinine and morphia were given when indicated.

November 20: 4 A. M.—Temperature, 103.6°; pulse, 120. Complains of pain in his chest. Quinine and morphia repeated through the day. 8 P. M.—Suffers greatly with singultus, which was controlled by small doses of brandy and water. 5 P. M.—Physical examination of chest gave bronchial respiration over entire area; dry râles heard in lower part of lung.

November 21: At midnight large mucous râles developed, with fine crepitant râles in lower part of lungs. He suffered all night with singultus, which could only be controlled by occasional inhalations of chloroform. Through the night there was gradual failure. The intestines became greatly distended, which was relieved by large doses of animal charcoal, and by rubbing the abdomen. At 5:30 A. M. he complained of great pain in his right hand and arm; examination showed fluctuation over back of hand: whole limb generally swollen. From 6 A. M. till time of death patient rested quietly; respiration, 42. Died 8 A. M. No postmortem.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

A CASE OF TUBERCLE OF THE LUNGS HEALED.

An eight-year-old girl, born of healthy parents, as a sequel of measles had a lingering attack of broncho-pneumonia; she had three relapses, which were each accompanied by high fever (105.8° Fahrenheit). As a result, percussion and auscultation revealed a remaining infiltration of the lower lobe of the left lung after complete disappearance of the fever. The cough was dry, and the slimy mucus expectorated contained no tubercle bacilli, although on account of the continued emaciation tuberculous disease was suspected. Two months after the beginning of the inflammation of the lungs, a copious expectoration of sputa resembling pus appeared, and was found to contain isolated tubercle bacilli.

Repeated examination of the sputa during the course of a few months following constantly revealed the presence of tubercle bacilli. After six months, owing to the favorable season of the year and much exercise in the open air, the general condition of the patient improved; she increased in weight, and the dullness over the lung gave place to a clearer resonance; the infrequent cough raised only a small quantity of slimy mucus in which tubercle bacilli could no longer be discovered.

A few weeks after this condition the child died from an intercurrent attack of rheumatic polyarthritis complicated with endocarditis.

In the region of the previous dullness section of the lung revealed numerous knotty groups of indurated connective tissue imbedded in normal lung tissue; only an occasional group could be found, the interior of which had undergone cheesy degeneration, and microscopical examination revealed only a few widely isolated and somewhat stunted tubercle bacilli (in ten prepared sections three or four bacilli were found); of even less occurrence were they found in two bronchial glands which had undergone cheesy degeneration.

Ibidem.—Professor Demme writes of a case of isolated tuberculosis of the thymus gland, which was probably inherited. The child was born of healthy parents, free from tuberculosis, and was nourished at the breast of the mother the first four weeks, after which it was fed on the milk of a cow. Soon after the mother's milk was discontinued, dyspeptic symptoms with diarrhœa appeared; as a result the child became much emaciated, and, owing to the increasing feebleness, died at the end of forty-two days from birth. On examining the chest, the only pathological sign was an area of dullness over the upper third of the sternum, and referred to the thymus gland. Opening the thoracic cavity, marked anæmia of the contained organs was found, as well as enlargement of the thymus gland, which extended from the hyoid bone downwards over the thyroid gland to the lower end of the sternum, and laterally a distance of six centimeters, overlapping the pericardium. In the two lobes of the part of the thymus lying within the thoracic cavity, were found three tubercle nodules the size of peas, and one the size of a hazel-nut, in which microscopical examination showed tubercle bacilli in small numbers. Demme calls attention to the fact that in spite of the absence of evidence of hereditary tubercle, the possibility of the tuberculosis in this case having been inherited must not be lost sight of, as infection by means of milk of a cow affected with pearl disease is not probable, the intestine and mesenteric glands having been unaffected.—Professor Demme in twenty-second annual report of the Jenner Hospital for Children at Bern, Switzerland, for the year 1884, published in *Jahrbuch fur Kinderheilkunde*, Band XXV, Heft 3, 1886.

ON THE TREATMENT OF HYDROCELE BY INCISION AND PARTIAL RESECTION OF THE TUNICA VAGINALIS.

The uncertainty of diagnosis in some cases, and the many relapses after puncture and injection, for which we must be prepared when adopting this latter method, induce the author to prefer the method of aseptic incision and partial resection to all other modes of treatment. The length of time required to establish a cure in fourteen recorded cases was:

10	days in	3 cases.
10 to 15	" "	2 "
15 to 20	" "	5 "
20 to 25	" "	2 "
25 to 30	" "	2 "
		14 cases.

Following the method there was hæmorrhage in one case, fever resembling an intermittent in one case, two cases of profuse suppuration, one case of orchitis, and one case of retension of urine for thirty-six hours.

In simple cases of hydrocele puncture and injection may be tried; should there be a recurrence, or if we have to do with thickened, indurated walls, we should, without hesitation, resort to incision, which nearly always promises a favorable prognosis. —Dr. Angagneur in *Bulletin général de thérapeutique,* June 15, 1886, page 513.

STATISTICS AND EXPERIMENTS ON THE PATHOLOGY OF PERITONITIS.

In a long introduction Grawitz commends highly the works of Wegner, who has made so many disclosures concerning the pathology of peritonitis; he explains in what respect the experiments of Wegner need re-examination and how they may be rendered more complete. All that Wegner discovered concerning the transudation and resorption capacity of the peritoneum is maintained to this day; but what he says concerning the bringing about of a purulent peritonitis and the rôle which bacteria and micrococci play in the process needs further investigation and correction, since we know to-day that suppuration can only take place under the influence of bacteria, and that of quite well defined species.

The results of the experiments of Grawitz are the following:

(1) *The introduction of bacteria* (spaltpilzen) *which do not excite suppuration into the normal abdominal cavity* causes no prejudicial effects even when introduced in enormous quantities. If with the fluid concerned there are mingled corpuscular bodies too large to pass along the lymph channels, they become encapsuled; if these corpuscular bodies consist of easily decomposable albumen no decomposition of the same will occur, even when mixed with these bacteria, which energetically decompose albumen in the test tube—"as long as the quantity of fluid does not much exceed the amount that can be absorbed by the animal in about one hour." To these bacteria, which are perfectly harmless in the healthy abdominal cavity, belong all these species which are constantly present in great quantity in the intestine of the rabbit; if a cold infusion of the excrement from the rabbit be introduced into the abdominal cavity no peritonitis arises: "the intestinal contents excite no peritonitis."

(2) *The introduction of bacteria* (spaltpilzen) *which produce no suppuration into the diseased abdominal cavity,* the resorption capacity of which is disturbed, will cause effects dependent upon whether or not the bacteria introduced are capable of decomposing albumen. In the one case by the

introduction into the intra-peritoneal cavity, of decomposable fluid, a picture of the clinical and anatomical facts of septicæmic intoxication are produced, in the other case large quantities of fluid are gradually absorbed unchanged.

(3) *The introduction of bacteria which excite suppuration, into the normal abdominal cavity* is as much without danger as the injection of indifferent organisms, provided they are suspended in a non-corroding or non-irritating fluid and that it is in a condition to be absorbed by the peritoneum. If we use as the fluid injected a solution of sugar or sodium chloride which cause an increased transudation into the abdominal cavity, there arises, apparently, irritation of the peritoneum, but after some time the absorption of the fluid injected and containing the bacteria of suppuration, begins and no peritonitis results.

(4) *The introduction of pus generating micro-organisms into the unhealthy abdominal cavity* gives rise to peritonitis: (*a*) when the abdominal cavity contains a nutritious stagnating fluid; (*b*) when corrosive substances which prepare a soil for the entrance of cocci of suppuration are mixed with the injection, (*c*) when a wound in the abdominal walls favors accumulation of the carriers of injection.

Keeping these points in view, Grawitz in eight hundred and sixty-seven postmortem examinations conducted by him at the Charité from the beginning of the year 1867 to 1885, has made special observations and for the purpose of description has divided these cases into large groups. For individual cases and especially for a history of the disease the reader is referred to the original; we can mention only briefly the most important facts.

Of especial interest is the long list of "primary," "idiopathic" suppurative inflammations of the lining membrane of the abdominal cavity. Grawitz was able in the great majority of his cases to ascertain the origin of the disease; that is, he was able to prove the existence of conditions as stated above in 4.

The injuries, especially taking cold, to which the inflammation is usually attributed, were proven by experiment to be of no moment as factors.

By far the largest group of cases is that of *secondary suppurative peritonitis* following infection, by contiguity, from some adjoining part; the largest class of such cases, numbering one hundred and seventy-six, originated during puerperal fever; thirty-two cases followed perforating ulcers of typhoid fever; twenty-four were due to perforation of the processus vermiformis; twenty-three, gangrene of unoperated strangulated hernia; twenty-one, perforation from carcinoma of the stomach; twenty, perforated tuberculous ulcers of the intestines; thirty-four followed pleuritis and gangrene of the lung; twenty-nine spread from uterus and appendages; twenty-eight, laparotomy; thirty-seven, herniotomy, etc.

The part which peritonitis plays in puerperal fever is very important: "of all lying-in women who die of puerperal fever about one third die of suppurating inflammation of the lining membrane of the abdomen."

Concerning the peritonitis of perforation, the degree of danger depends on the above conditions: that is, on the quality and quantity of the substances discharged into the abdominal cavity and on the ulcerating process of that part of the peritoneum through which the perforation occurred. Grawitz holds the last point as of special importance since a perforation of traumatic origin gives far better prospect of recovery than one due to ulcerating processes. Peritonitis after rupture of the urinary bladder is caused by the gradually increasing quantity of urine and the introduction of bacteria by means of the catheter. The change of a serous transudate into a purulent fluid after one or more punctures is easily explained by the introduction of pus forming cocci by means of the trocar. Grawitz speaks more fully of the peritonitis from stenosis of the intestine and strangulated hernia and discusses singly the points here coming in question: (1) The local disturbance of the circulation in the strangulated part of the intestine; (2) the tissue change brought about by the accumulation of bacteria in the same; (3) the general disturbance of nutrition and resorption which is dependent upon distension of the portion of intestine above the seat of strangulation. Experiments on animals here also explain and confirm what is said. Grawitz relates the clinical history of a case which proves "that in complete strangulation (even in beginning gangrenous destruction of the incarcerated portion) death may follow without peritonitis as a result of great distension of the intestine above the seat of strangulation."

The consideration of tuberculous peritonitis forms the subject of the last section of the treatise. The two different types anatomically, in which we see tuberculosis of the peritoneum—simple eruption of miliary tubercles and formation of tubercles with evidences of inflammation mostly of a chronic character—explain themselves, excluding chronic inflammation as a complication of tuberculosis, by the different ways over which the bacilli reach the peritoneal tissues. Observations and experiments on animals teach "that in general, by the spread of tubercle bacilli along the blood current a preponderance of true tuberculous nodules arise in the most diverse and widely distributed tissues, while by the spreading of bacilli indifferently through the tissues, whether by means of wandering cells or along the lymph stream, the local symptoms of inflammation prevail."

Analogous to suppurating peritonitis, we can distinguish in the tuberculous variety a primary form—introduction of germs into the peritoneum from distant seats of disease—and a secondary variety—introduction of germs from neighboring tissues. In primary tuberculous peritonitis it is not always easy to ascertain the source whence the bacilli arise, since it is possible that sometimes the tubercle bacilli, as well as the cocci of suppuration, are carried directly onward into the blood or lymph stream without first forming a colony at the seat of entrance. If only a comparatively small number of bacilli reach the circulation a particular tendency of the peritoneum is necessary to bring on tubercular peritonitis. Grawitz mentions a case in which this peculiar tendency was caused by the presence of cirrhosis of the liver.—*Dippe.*—Professor Dr. Paul Grawitz (Charité-Ann., XI., page 770, 1886) in *Schmidt's Jahrbucher*, Number IX., 1886.

TREATMENT OF DRYNESS OF THE MOUTH IN FEBRILE DISEASES.

For the tormenting thirst and troublesome dryness of the mouth in fever patients the author employs painting the tongue every ten minutes with chemically pure glycerine. His patients are always remarkably relieved by this treatment.—Dr. Cotter in *Journal de Medicine de Paris*, page 601, 1886.

STUDY OF BACTERIOLOGY IN THE "ECOLE PRATIQUE," PARIS.

The students of medicine have opportunity, since one month ago, to cultivate bacteria. Under the direction of Professor Cornil, and after much exertion, a laboratory for bacteriology has been opened in the "rue de l'Ecole de médicine." The courses are given by the assistants of Cornil, Dr. Chantemesse and Mr. Clado. In a large, well-lighted and well-ventilated hall there is room for sixteen students. Each student has a table with the necessary apparatus, furnished partly by himself and partly by the laboratory. With this hall are connected smaller rooms for cultures and different temperatures. Two large rooms are reserved for the instructors.

In six weeks the student learns to recognize and cultivate the most active pathological fungi. Owing to the lack of space an enlargement of the laboratory is spoken of.

Before the building of this official laboratory the study of bacteriology in Paris was rendered possible only through the courtesy of Pasteur or his assistants.—Dr. A. Florand in the *Gazette medicale de Paris*, Number XII, 1886.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY WILMOT F. MILLER, ANN ARBOR, MICHIGAN.

CARIES AND NECROSIS OF OS CALCIS.

M. L., aged eleven. Admitted October 13, 1886.

History.—One year ago, while at play, he was hit on the heel of his right foot with a potato, thrown by a playmate. One week after this, the heel, which had been painful and swollen, broke and discharged some pus. The foot had not been painful until within the past few months. The pain, which has increased in severity, has been so severe that the foot cannot be used, and he is compelled to go on crutches. Some weeks ago several pieces of dead bone came away.

Present Condition.—His general health is good. The heel is swollen, and from several openings on each side is discharged a fetid pus. The pain is most severe at night.

October 14: Clinic.—A probe passed into the sinuses comes in contact with dead bone. Patient given chloroform, and an incision made through the heel to the tuberosity of the os calcis; the tendo-Achilles divided, and the greater part of the os calcis was removed; the interior cancellous portion was scraped out with the spoon and gouge. Wound washed with bichloride solution (one to one thousand) and dressed antiseptically.

October 17: Foot dressed; wound healing nicely.

October 18: Swelling of foot reduced; a small portion of dead bone removed.

November 4: The general condition of the foot greatly improved, but portions of adjacent bones show that they were also involved in the disease. The patient was given chloroform, and the external portion of the foot freely opened, and portions of the os calcis, astragulus and cuboid bones removed.

December 29: Wound nearly healed. Can walk some without the assistance of crutches. Ankle-joint anchylosed. Free movement in other joints of the foot. When standing on foot it is in the natural position. Heel tender and movement painful. Discharged.

NECROSIS OF FEMUR; DISORGANIZATION OF KNEE-JOINT; AMPUTATION.

Justin H., aged fifteen. Admitted October 20, 1886.

History.—Family history good. In August, 1885, he was taken down with a very severe pain in his left knee. This was soon followed by tenderness and swelling, which in time extended to the thigh, and finally involved it throughout its entire extent. The swelling progressed until this portion of his limb had become enormously distended. It was then lanced by the attending physician, which permitted more than a gallon of pus to escape. The incision healed, but several other openings formed spontaneously near the knee-joint, which have continued to discharge unhealthy pus. No dead bone came away until a few weeks ago, when a few small pieces came out through a sinus. During the summer of this attack he went into the water frequently and remained until he would become chilly, but had not gone in for several weeks previous to the occurrence of the pain in his knee. After the pain was first noticed he used his limb for a few days, but since then has not been able to walk.

Present Condition.—Appetite good; sleeps well; has no pain at night; weak and greatly emaciated: temperature, 101°; pulse, 90: Left leg slightly flexed; knee-joint anchylosed and enlarged. Several discharging sinuses. A point of dead bone protrudes through an opening on anterior part of the thigh near the joint.

October 21: Patient presented at clinic,* and being placed under chloroform, Professor Maclean enlarged the opening and removed several pieces of dead bone, but exploration with the finger proved that the femur was so badly necrosed that exsection of the bone or amputation of the limb would be required to remove the disease. Further operation deferred until patient could be consulted.

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* For Remarks see THE PHYSICIAN AND SURGEON, December, 1886.

October 21: After operation one-eighth grain morphia.

October 27: 6 P. M.—Temperature, 102°; pulse, 105. Ten grains of sulphate of quinine were administered.

October 28: 6 P. M.—Temperature, 103°; pulse, 106. 8 P. M.—Temperature, 98.8°; pulse, 95. Ten grains of quinine.

October 29: 6 P. M.—Temperature, 104°; pulse, 102. Ten grains antipyrine.

October 30: 8 A. M.—Temperature, 100°; pulse, 100. Five grains antipyrine.

November 1: The patient willing to have any operation performed, was placed under chloroform, and Professor Maclean proceeded to operate. An oval incision was made inferior to the patella, through the ligament into the joint, with the view of making a resection of the lower end of the femur, and to ascertain the condition of the joint. The patella and surrounding structures were turned back, and the lower end of the femur exposed. A section of the upper portion of the epiphysis, which was found separated from the shaft, was removed, with about two inches of the lower end of shaft of the femur. The section of the shaft showed that the whole lower end of the femur was necrosed and enclosed in a cylinder of new bone. In addition to what had been taken away, over four inches more of the old shaft were easily removed from the interior of the new femur, allowing a quantity of very fetid pus to escape. Upon examination the epiphysis was found to be spongy and carious, and the structures of the joint were greatly disorganized; consequently the operation of exsection or resection was abandoned, and the thigh was amputated at the middle third. A drainage tube was placed between the flaps, and the stump put up in antiseptic dressings. At 3:40 P. M. given one-sixth grain of morphia. 12 P. M.—One-eighth grain morphia.

November 2: 6 P. M.—Temperature, 99.5°; pulse, 90. One-eighth grain morphia. 1 A. M.—One-eighth grain morphia.

November 3: 6 P. M.—Temperature, 100.5°; pulse, 102. One-sixth grain morphia.

November 6: Stump dressed, the drainage tube and sutures removed, and a few horse-hairs were drawn through between the flaps. There was some discharge, which, having a slight odor, the wound was thoroughly washed with bichloride solution and the stump dressed with bichloride gauze.

November 15: Presented at clinic. Wound dressed. Healing nicely.

November 20: Dismissed.

GENERAL CORRESPONDENCE.

PARIS LETTER.

TORNWALDT'S DISEASE—HYPERSECRETION OF LUSCHKA'S GLAND.

Dr. Luc, formerly hospital house surgeon, publishes in *La France Medicale* the following contribution to the study of Tornwaldt's disease. The principal object of Dr. Luc is to call attention to the excellent clinical results obtained by Dr. Tornwaldt (Dantzig), in the treatment of obstinate pharyngitis.

In studying naso-pharyngeal affections Dr. Luc was struck by the fact that the true symptoms of ozena were, in certain cases, not exhibited, or only in an incomplete manner; atrophy of the lower turbinated bones, for example, and the abnormal dimensions of the nasal cavities, which constitute the essential anatomical characteristics and mechanical cause of true ozena. The patients, however, were troubled with pharyngeal dryness, and the presence of purulent mucosities, fœtid and adhesive scabs in the nasal cavities, more especially in the nasal and buccal region of the pharynx. The washing of the naso-pharyngeal cavity caused these to disappear temporarily, but they returned in their complete form at the end of two or three days. In several cases a curative result by means of a local, modifying treatment, was attempted; tincture of iodine or nitrate of silver in solution applied with a camel's-hair brush, insufflations of caustic or astringent powders applied to the upper parts of the pharynx where the catarrh was supposed to exist. These attempts remained fruitless.

Dr. Luc's attention was then drawn to two articles in the *Monatschrift fur Ohrenheilkunde* (March and May, 1886) published by Drs. Keimer and Broich, who gave the particulars of cases, similar to those described above, successfully treated by the cauterization of the pharyngeal bursa. These authors stated that they had undertaken their experiments with the object of confirming the facts, published by Dr. Tornwaldt, in June of the preceding year.

In 1868 Luschka gave a complete description of the gland named after him, which Mayer (Bonn) had called attention to for the first time in 1842. This description was as follows: On the median line of the upper wall of the pharynx in the centre of the adenoid tissue there frequently exists an orifice about the size of a pin's head and rounded in shape. This orifice leads into a passage measuring fifteen millimetres long and six millimetres wide, at its greatest width, and terminating in a point on a level with the fibrous tissue of the basilar apophysis of the occiput, where its presence is indicated by a depression situated in front of the pharyngeal tubercle. The wall of this bursa, of which the thickness varies from half a millimetre to a millimetre and a half, principally composed of adenoid tissues, is lined by a mucous membrane of uneven surface covered with projections and longitudinal folds. Luschka observed that the opening of the gland, if suppressed caused the formation of single or multilocular cysts, and established an analogy between this pathogeny and the pathogeny of encysted hydrocele of the spermatic cord.

In 1878 Ganghofner published a careful study on the anatomy of the pharyngeal bursa. He contested the opinion of Luschka who considered this bursa the vestiges of the passage of communication between the pharangeal cavity and the cerebral hypophysis cavity. Ganghofner considered it to be a normal *cul-de-sac* of the pharynx, analagous to the cavities described by Rosenmüller and determined by the insertion of the mucous membrane on the space between the rectus muscles of the head. He added to Luschka's description new details. He described an investment epithelium, partly stratified, partly cylindrical, lining the cavities of the bursa and glandular orifice, and frequently, septa.

The first success in Tornwaldt's researches was the perfecting of the method of inspection of the nasal pharynx by means of Voltolini's palatine hook. By drawing forth the uvula and soft palate by means of this instrument and so rendering the employment of looking glasses, three centimetres in diameter, possible for posterior rhinoscopic examination, he was enabled to examine the pharyngeal palate in the dark space, concealed by the projection of the atlas, and in this manner was led to attach more importance to the action of the pharyngeal bursa in a certain number of affections of which the causes until now were unknown. By this method of examination Tornwaldt was enabled to observe the existence of the orifice of the pharyngeal bursa, under the aspect of an infundibuliform depression of a rounded or oval form, situated immediately on the median line between the upper border of the choanæ and the projection of the atlas. He discovered two distinct classes of affection, in relation with this cavity, namely, hypersecretion due to obstinate catarrh, and its localization in the interior of the bursa, when the free portion of the mucous membrane is normal; those characterized by the presence of a pharyngeal cyst produced by the occlusion of the gland and the enclosure of the fluid secreted in the interior. According to Tornwaldt the hypersecretion of the pharyngeal bursa caused the issue of a fluid in which mucous or purulent elements predominate. This fluid spreads itself over the posterior wall of the pharynx where it leaves deposits which form scabs. This affection differs from ozena and nasal catarrh in that the secretions (except in cases of continued nasal inflammation) do not touch the space between the orifice of the bursa and the superior border of choanæ. The pharyngeal cysts, which occupied the centre of the pharyngeal palate had the aspect of rounded, translucid projections, of yellowish hue. In certain cases where the projection was not very apparent, Tornwaldt diagnosed the existence of the cyst, and was enabled to confirm his opinion in making an incision in the upper wall of the pharynx and thus giving an outlet to the encysted fluid.

In cases of hypersecretion, Tornwaldt furnishes the following facts to support the hypothesis that secretions proceed from the pharyngeal bursa: (1) The possibility of observing directly with the rhinoscope the issue of secretions from the bursa; (2) the suspension of hypersecretion caused by local therapeutical means, applied to the pharyngeal bursa; (3) the suspension of hypersecretion when the orifice of the cavity is accidentally obstructed; (4) the appearance of symptoms, peculiar to hypersecretion of the gland, when the incision of a cyst of this organ transforms its cavity into an open, suppurating sac. The subjective symptoms occasioned by diseases of the pharyngeal bursa do not differ from those observed in general naso-pharyngeal diseases. Tornwaldt divides them into two classes: (*a*) local symptoms; (*b*) symptoms due to the influence of the disorder upon other organs. Belonging to this second class are the following symptoms: (1) Affections of the nasal mucous membrane (hyperhæmia, hyperplasia) and polyps (the recurrence of these tumors only ceases after direct action upon the Luschka gland); (2) auditory affections; (3) granular pharyngitis (the granulations re-appear, in spite of repeated cauterizations, if the treatment is not applied to the pharyngeal bursa, the source of all the affections; (4) chronic laryngitis, possibly predominating on a level with the interarytenoidian region (whence it may be confounded with tubercular laryngitis at the outset); (5) bronchial catarrh; (6) chronic gastric catarrh; (7) cough, caused by the irritating contact of the interarytenoidian region with the pathological secretions of the pharyngeal palate; (8) pulmonary asthma; (9) sternal pains; (10) frontal or occipital cephalagia. The correlation of all these symptoms with the pharyngeal disease is scientifically proved by the author. The duration of the preceding affections is only limited when intervention, with the object of curing the catarrh in the Luschka bursa or destroying the cavity, is effected. Tornwaldt's work is followed by twenty-five clinical observations, scrupulously taken, and confirming all the author's propositions.

Dr. Luc submitted several patients suffering from obstinate pharyngitis to a careful examination of the upper pharyngeal region, according to Tornwaldt's method. The Voltolini hook was employed. The employment of this hook enabled the operator to see farther and more clearly. In cases of patients who present exceptional reflex sensibility of the pharyngeal region, this instrument causes vomiting; occasionally the posterior pillars contract spasmodically behind it, so that observation is rendered difficult. These difficulties may be partly prevented if the region is previously painted with a concentrated solution of hydrochlorate of cocaine, and if the patients are examined before meals. In the examination of the pharyngeal cavity made with the aid of the Voltolini hook the largest laryngeal mirrors may be employed, instead of the minute mirror usually employed for posterior rhinoscopic examination. In most of the cases examined by Dr. Luc the pharyngeal palate presented the aspect of surface studded with mammiform projections, situated between the vomer and the atlas; these spots presented a long posterior depression which is divided in two by a septum. This depression answers to the description of the orifice of Luschka's gland given by Tornwaldt. The Voltolini hook was successfully employed in the case of several children suffering from adenoid fungoid growth in which it was doubtful whether some of these new formations had not remained, after using the Löwenberg forceps. Dr. Luc did not detect in any of his patients the existence of a pharyngeal cyst as described by Tornwaldt. Cases of hypersecretion of the pharyngeal bursa were numerous. The patients complained unanimously of scabs and mucous secretions from *upper part of the throat.* This was the one unvarying symptom. On examination the posterior wall of the pharynx was found to be dry and covered with yellow or greenish scabs, occasionally fœtid. The aspect and conformation of the nasal cavities varied. In cases where the atrophy of one of the lower turbinated bones increased the dimension of the corresponding nasal cavity it was evident that catarrh of the pharyngeal bursa was the primary cause, and nasal catarrh was owing to the influence previously exercised on the pharyngeal and nasal symptoms by the cauterization of Luschka's gland—the cauterization of the pharyngeal bursa was effected by means of a fine galvano-cauterizing knife, two centimetres long in the incandescent portion, with a double curve in the upper part which allows of its insertion into the nasal pharynx, and from thence into the cavity. V.

ANOMALOUS GROWTH OF THUMB NAIL.

Dear Editor: November 7, 1884, C. W., aged nineteen, mechanic working in the New York Central railroad car works, bruised the matrix of the left thumb nail, removing a small portion of the nail. While the wound was still recent it was brought in contact with caustic potash which turned the thumb black to the second phalanx. Patient tried home remedies, for example, vinegar and milk and salt for eight days. Pain being severe and no improvement resulting a physician was called who removed the remainder of the nail. This was followed by ten days of intense suffering. The wound then healed, the nail growing both backward and forward from the matrix. The backward growing part was about one-fourth of an inch in breadth, and it came out through the fold of integument over the joint. Since the first operation it has been twice removed. It is productive of severe pain and has produced ankylosis of the joint. The removal of the first phalanx was recommended at the New York State Dispensary at Albany, New York.

Patient very desirous of having the operation done as recommended. What would you advise?

Very respectfully yours, B. P. Wright, M. D.
No 57 Furnace street, Syracuse, New York.

[We would advise amputation of distal phalanx.—Editor].

HEALTH IN MICHIGAN DURING NOVEMBER.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of November (four weeks ending November 27), 1886, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, bronchitis, consumption of lungs, intermittent fever, tonsilitis, influenza, remittent fever, diarrhœa, typho-malarial fever, diphtheria, whooping-cough, pneumonia, inflammation of kidney, erysipelas, typhoid fever (enteric), inflammation of bowels, dysentery, scarlet fever, membranous croup, cholera infantum, cholera morbus, measles, inflammation of brain, puerperal fever, cerebro-spinal meningitis and small-pox.

For the month of November, 1886, compared with the preceding month the reports indicate that bronchitis, pneumonia, and influenza increased, and that diarrhœa, cholera infantum, and cholera morbus decreased in prevalence.

Compared with the preceding month the temperature in the month of November, 1886, was much lower, the absolute humidity and the night ozone were less, the relative humidity and the day ozone were slightly more.

Compared with the average for the month of November in the eight years, 1879 to 1886, intermittent fever, pneumonia, typho-malarial fever, remittent fever and diphtheria were less prevalent in November, 1886.

For the month of November, 1886, compared with the average of corresponding months for the eight years, 1879 to 1886, the temperature was lower, the absolute humidity was less, the relative humidity was the same, the day and the night ozone were more.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of November, 1886, at sixty-three places, scarlet fever at forty-two places, typhoid fever at thirty-five places, measles at eleven places, and small-pox at one place.

Reports from all sources show diphtheria reported at the same number of places, scarlet fever at four places more, typhoid fever at eight places less, measles at five places more and small-pox at the same number of places in November, 1886, as in the preceding month. HENRY B. BAKER, M. D., Secretary.

LANSING, December 2, 1886.

HEALTH IN MICHIGAN DURING DECEMBER.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of December (five weeks ending January 1, 1887), 1886, as follows, the diseases being arranged in the order of greatest prevalence:

Neuralgia, rheumatism, bronchitis, tonsilitis, consumption of lungs, influenza, intermittent fever, pneumonia, diarrhœa, remittent fever, inflammation of kidney, erysipelas, diphtheria, typho-malarial fever, inflammation of bowels, whooping-cough, scarlet fever, measles, membranous croup, dysentery, typhoid fever (enteric), inflammation of brain, cholera morbus, puerperal fever, cholera infantum, cerebro-spinal meningitis and small-pox.

For the month of December, 1886, compared with the preceding month the reports indicate that pneumonia, tonsilitis, and neuralgia increased, and that remittent fever, whooping-cough, and typhoid fever decreased in prevalence.

Compared with the average for the month of December in the eight years, 1879 to 1886, intermittent fever, remittent fever, typhoid fever, diphtheria, consumption of lungs, bronchitis, and pneumonia were less prevalent in December, 1886.

For the month of December, 1886, compared with the average of corresponding months for the eight years, 1879 to 1886, the temperature was considerably lower, the absolute humidity was slightly less, the relative humidity and the day ozone were slightly more, and the night ozone was less.

Including reports by regular observers and others diphtheria was reported present in Michigan in the month of December, 1886, at seventy-one places, scarlet fever at forty-six places, typhoid fever at twenty-six places, measles at sixteen places, and small-pox at Detroit.

Reports from all sources show diphtheria reported at eight places more, scarlet fever at four places more, typhoid fever at nine places less, measles at five places more, and small-pox at the same number of places in December, 1886, as in the preceding month (November, 1886).

HENRY B. BAKER, M. D., Secretary.

LANSING, January 6, 1887.

EDITORIAL PERISCOPE.

EXPLORATORY OPERATIONS.

Before the use of anæsthetics an exploratory operation was not an unknown procedure, but it was one rarely practiced. The object of the surgeon then, was to operate as quickly as possible. The diagnosis was made, and the aim was to complete the ordeal rapidly and skillfully. Since the use of anæsthetics and the improved methods of dressing wounds, exploratory surgery has developed to a degree that it has now become a question if its usefulness is not overreached. With a patient anæsthetized the surgeon now leisurely explores a part and establishes a diagnosis, and decides to complete or abandon the contemplated operation. The operation is continued with the same care and attention. But this consciousness on the part of the operator that the patient is suffering no pain, is liable to lead the inexperienced surgeon to prolong the operation to the detriment of a successful termination, and to the positive injury of the patient. When this danger is not kept prominently in view, operative surgery is likely to lose that decision and dispatch which is so essential in incisions and manipulations, and without which both the credit of the profession and the interests of the patient must suffer. Exploratory surgery has a two-fold value: diagnostic as well as curative. It is from the former rather than the latter use of it, that harm is liable to be done. When exploration is made to determine the character of a swelling, whether it be tumor or abscess, which could not be determined with certainty until the tissues were divided down to or into it, is a proper use of the measure; but to thrust a knife into living human tissue, merely to complete a diagnosis, when it is evident that the trouble cannot be removed, is not justifiable and is to be condemned. In surgery of the viscera—abdominal, renal, vesical, pelvic, thoracic, and cranial surgery—where, at times, it is impossible to know the condition without opening the region, the value of exploratory operations is best shown; here the diagnostic leads up to, and is only a part of, the curative measure. In these cases, however, the dangers of misuse and error are proportionate to the triumphs of care and skill. It is very important, then, that a measure so potent for good should not fall under the bane of distrust from its misuse or abuse.

LABORATORY OF PRACTICAL HYGIENE.

In the budget of requests, sent by the Board of Regents of the University, to the legislature of Michigan, they ask for an appropriation of $75,000 for a building which shall provide better facilities for the existing laboratories of physics, physiology, pathology and microscopy; and for the accommodation of a Laboratory of Practical Hygiene which the State Board of Health propose to establish.

It is argued by this body that nearly every civilized country is now manifesting great interest in the protection of the health, and prolongation of the lives of its citizens. Germany has established a number of hygienic institutions, in connection with its universities, and all students are instructed in sanitary science.

The already famous imperial laboratory of hygiene at Berlin, under the charge of Professor Koch, has accomplished a great work. Here the contagious nature of consumption (the most dreaded of all diseases in this latitude) has been demonstrated, and the public is now being instructed in the methods of procedure necessary to limit its spread, and the probabilities are that by intelligent care in this direction, the death-rate from this disease will be greatly decreased.

France has given much aid to practical hygiene, and the labors of Pasteur on anthrax and hydrophobia are known and appreciated everywhere.

The municipal laboratory of Paris is maintained by the city, and for a small fee anyone may have any sample of food or drink tested for adulterations. In this way the people of Paris have become quite thoroughly posted concerning adulterations, and from this knowledge the wisest and most satisfactory enactments against food adulterations have been made, and are enforced.

England through its local government board has carried on many important hygienic investigations, among which may be mentioned the recent studies which have demonstrated the fact that scarlet fever may be transferred from cows to children through milk.

In the United States, much money has been spent in health work. Several states have salaried milk analysts, inspectors, etc.

The legislature of Louisiana two years ago appropriated $16,000, to enable Dr. Holt, of the State Board of Health, to make some experiments in the disinfection of ships, and as a result of those experiments, which were successful, yellow fever has been practically kept out of the state. The same state maintains the disinfection of ships at the mouth of the Mississippi, and thus protects not only itself, but the whole of the Mississippi Valley. The state of Mississippi appropriates $45,000 annually for health work.

The policy of Michigan in its health work, as in other departments of the state legislation, has been to educate the people. The Michigan State Board of Health is not an executive body, its powers are wholly advisory, and it has accomplished the great work for which it is universally given credit, by educational means; these it hopes to strengthen and widen by the laboratory of practical hygiene, which the Regents have been asked to establish.

There is needed some place where every health officer of town, village, or city can have samples of drinking water, or articles of food, tested for impurities and adulterations. This could not be done for nothing, but at a minimum fee, and the money obtained for work of this kind could be turned into the laboratory fund; this would give every locality in the state a direct interest in the University, and all could see the practical benefit to be derived from this department. Reflexly this would aid the University and lead to its more hearty support by the people.

There should also be carried on in such a laboratory original investigations concerning the causation, nature, and prevention of disease. There can be no question as to the duty of the state in protecting the lives of its citizens, and no one can deny the fact that education in sanitary matters is one of the most powerful protective aids that can be furnished any people. Again, the instruction offered by such a laboratory to its students will make them fit advisers in all sanitary matters to the various communities in which they live.

The following is a proposed plan of study to be followed in such a laboratory:

SCHEDULE OF STUDIES.

I.—The Air.—A. Physical studies:—(*a*) Observations on temperatures and the influence of temperature on health; (*b*) Determinations of air pressure and the effects of variations in air pressure upon diseases of the lungs and heart; (*c*) Determinations of air moisture and the effects of climate as affected by moisture; (*d*) Determinations of ozone and a study of its relations to disease; (*e*) Ventilation of houses. B. Chemical studies:—(*a*) Analysis of air and determinations of carbonic acid gas; (*b*) Study of organic matter in the air and its effect upon health; (*c*) Microscopical studies of the air.

II.—The Soil.—A. Physical studies of the soil:—(*a*) Determinations of porosity; (*b*) Determinations of the capacity of the soil for the absorption of water; (*c*) Determinations of moisture; (*d*) Determinations of temperature. B. Chemical examination of the soil:—(*a*) Determinations of organic matter; (*b*) Analysis of ground air; (*c*) Analysis of ground water; (*d*) Microscopical examination of soil; (*e*) Diseases due to soil polution.

III.—Water.—(*a*) Physical properties; (*b*) Chemical analysis; (*c*) Microscopical examination; (*d*) Diseases due to impure water.

IV.—Foods.—(*a*) Nutritive value of foods; (*b*) Economical value of foods; (*c*) Study of individual foods; (*d*) Analysis of foods; (*e*) Detection of adulterations.

V.—Clothing.—(*a*) Physical properties of clothing; (*b*) Chemical properties of clothing; (*c*) Hygienic considerations of clothing.

VI.—Healthy Homes.—(*a*) Sanitary locations; (*b*) Sanitary properties of building material; (*c*) Study of air, space and ventilation; (*d*) The size, arrangement and care of rooms; (*e*) Study of temperature and methods of heating; (*f*) Water supply; (*g*) Disposal of waste.

VII.—Contagious Diseases.—(*a*) The nature and history of contagious diseases; (*b*) Study of germs; (*c*) Restriction of contagious diseases; (*d*) Vaccination; (*e*) Disinfectants and disinfection.

VIII.—Original Investigations.

The great importance of a laboratory to carry out this proposed course of work is patent; and that it should be established in the University is so obvious that argument is not necessary to make it understood.

CONDENSATIONS.

IMPROVEMENTS.—We call the attention of our readers to the change in the size, the type, and the paper of this number of THE PHYSICIAN AND SURGEON, and wish to state, that the lateness of this issue is due to the delay in getting the new supplies.

FALSE RABIES.—Under this head the *Lancet* asks the question: "How long will it be ere it is properly recognized that every disease of the brain produced by inoculation of morbid matter is not rabies, however much the symptoms evoked may resemble those of the disease." Dr. Spitzka believes that he can produce rabies by the inoculation of any dirty matter whatsoever into the cerebral circulation: so thought earlier generations with regard to tuberculosis, but recent discovery has shown that tubercle can only be produced by the employment of specific matter. It seems that such confusion arises from the want of recognition of the fact that the signs of disease of the nervous system are as limited in number as the letters of the alphabet. Hence it happens that disease of any organ can be manifested only by the pathological signs peculiar to that organ. So that if disease, no matter what its nature, affect the medulla oblongata, the symptoms that arise might have a general likeness to those of rabies.

NEW HYPODERMIC TABLETS.—Professor Robert Bartholow has suggested a number of new remedies to be administered hypodermically, which have been added to the list of compressed hypodermic tablets manufactured by John Wyeth & Brother. The safety and convenience of these accurately prepared tablets are daily bringing them into more general use. Recent improvements made by this firm enable them to manufacture these tablets free from any foreign material, which insures rapid solution and freedom from local irritation.

DIPHTHERIA AND SCARLET FEVER IN DETROIT.—Dr. Wight, Health Officer of Detroit, has prepared a table of statistics showing the relative prevalence and virulence of diphtheria and scarlet fever in Detroit the past five years. The proportion of deaths resulting from diphtheria to population in 1882 was one to 508 inhabitants; in 1883, one to 382; in 1884, one to 597; in 1885, one to 587; in 1886, one to 516. As regards scarlet fever the comparison is: In 1882, one to 856; in 1883, one to 1948; in 1884, one to 3500; in 1885, one to 2350; in 1886, one to 1180.

INOCULATION OF TUBERCLE.—Since the discovery of the specific bacillus of tubercle the communicability of the disease is capable of demonstration. Among the latest cases recorded which leave little doubt that such an origin of the disease is not infrequent, is one related by Dr. Elsenberg in which the disease was communicated by a curious custom which prevails among the lower classes of the Jews, of sucking the wound on the penis after the rite of circumcision has been performed. From this custom the author has seen syphilis communicated, and latterly undoubted tubercle. The case which Dr. Elsenberg records was a child born in the month of September of perfectly healthy parents, which was circumscribed on the eighth day and the wound sucked as usual under the idea of stopping the hæmorrhage and cleansing it; but instead of healing as customary the wound spread and formed an ulcer, the lymphatic glands became affected, and in the month of February the child was placed under the treatment of Dr. Elsenberg; but death ensued in the month of March. Tubercle bacilli were found in the tissue of the foreskin. An examination of the man who sucked the wound at first disclosed nothing of importance but it was found that he coughed at times and brought up some mucus; some of this was examined and found to contain bacilli.

RAPID DILATATION IN DYSMENORRHŒA.—Rapid dilatation of the cervix by instrumental means in cases of dysmenorrhœa and sterility is strongly recommended by Dr. Goodell. He finds it much more satisfactory than tents. In one case where the dysmenorrhœal pain was so severe that two physicians were in attendance giving chloroform for forty-eight hours, a single dilatation effected a cure. "No serious symptoms," he says, "have ever followed, though the dilatation is carried to the extent of an inch or an inch and a quarter. In four or five cases lacerations have resulted, but never of sufficient magnitude to require a suture."

THE ACTION OF SALINE PURGATIVES.—From a series of experimental researches into the action of saline purgatives, Dr. Leubuscher concludes: (1) That an exaggeration of the peristaltic movements of the intestines only plays a secondary part in the action of saline purgatives; (2) In whatever manner saline purgatives may be introduced into the intestine, the intestine becomes the site of a great secretion of liquid, which is the principal cause of the purgative action; (3) It is impossible to claim for saline purgatives that they act as a barrier to re-absorption; (4) Saline purgatives introduced into the circulation in sufficient quantity produce constipation.

INTRA-PULMONARY INJECTIONS IN PHTHISIS.—Dr. White, of New York, advocates the plan (*New York Medical Record*) recommended by Gougenheim and others, of injections into pulmonary cavities in phthisis, believing with them that life may be prolonged and sometimes saved. He finds the following formula to occasion the least amount of irritability when used: Atropia, one-third of a grain; sulphate of morphia, two grains; tincture of iodine, three drachms; carbolic acid (pure), twenty minims; glycerine, one drachm and a half; alcohol (diluted twenty to thirty per cent.), one ounce and a half: the quantity injected at a time being from fifteen to thirty minims. He employs a syringe capable of holding one drachm of fluid and provided with needles which are perforated near the tip in the form of spray.

ABORTIVE TREATMENT OF GONORRHŒA.—A correspondent writes to the *Lancet* that he lately had an opportunity to satisfactorily test the following plan of treatment. The disease in each case was in the first stage, and confined to the fossa navicularis. He gave each a flexible catheter, and a bottle with pure carbolic acid, one drachm, and olive oil, three drachms, and told them to anoint the catheter with the oil, and pass it into the urethra about an inch and a half every half hour for five hours. The next day they returned without any symptom of gonorrhœa, but the urethra feeling sore and tender. There was no return of the disease in the cases thus treated. Of course this could only be used when the disease is detected at once. The author suggests that a milder application might answer equally well.

MERCY HOSPITAL.—The Annual Report of this institution, which is located at Big Rapids, Michigan, and under the care of Dr. F. J. Groner, shows that there were five hundred and fifty patients treated during the year. There have been five thousand patients cared for since the opening of the institution in 1879. Many of the cases were surgical, which have been very successfully treated; particularly is this true for the past year. During the past year six cases of cuts into the knee-joint were received, four of them badly inflamed and the joint filled with pus when admitted. Incisions were made, the cavity of the joint washed out, and the limb saved without a single unfavorable symptom. The same results were obtained in compound fractures.

THE PHYSICIAN'S LEISURE LIBRARY.—In the regular monthly acknowledgement of the receipt of books and pamphlets, the volumes of this series were noticed as they were published. But we feel that such a great departure in medical publishing is worthy of more special notice. The series will consist of twelve volumes, as follows: Inhalers, Inhalations and Inhalants, by Beverley Robinson, M. D.; The Use of Electricity in the Removal of Superfluous Hair and in the Treatment of Various Facial Blemishes, by Geo. H. Fox, M. D.; New Medications, by Dujardin-Beaumetz, translated by E. P. Hurd, M. D.; The Modern Treatment of Ear Diseases, by Samuel Sexton, M. D.; Spinal Irritation, by William A. Hammond, M. D.; The Modern Treatment of Eczema, by H. G. Piffard, M. D.; Antiseptic Midwifery, by H. J. Garrigues, M. D.; On the Determination of the Necessity for Wearing Glasses, by D. B. St. John Roosa,

M. D.; The Physiological Pathology and Therapeutic Effects of Compressed Air, by Andrew H. Smith, M. D.; Granular Lids and Contagious Ophthalmia, by W. F. Mittendorf, M. D.; Pregnancy, Parturition and the Puerperal State and Their Complications, by Paul F. Mundé, M. D.; Practical Bacteriology, by Thomas E. Satterthwaite, M. D. The complete series will be furnished for two dollars and fifty cents, or single copies can be obtained at twenty-five cents each. The publisher, Mr. Geo. S. Davis, of Detroit, for his enterprise in medical publishing, in putting out this "library" of truly valuable works, deserves the most cordial support of the profession.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.—The January number of this valuable medical periodical contains the following original papers: Rubella (Rötheln), by I. S. Atkinson, M. D.; On Some Forms of Albuminuria not Dangerous to Life, by T. Grainger Steward, M. D.; An Experimental Study of Mycotic or Malignant Ulcerative Endocarditis, from the Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York, by T. Mitchell Pruden, M. D.; Actinomycosis Hominis, by E. Markham Skerritt, M. D.; Is the "Knee-Kick" a Reflect Act?—A Research made at the Physiological Laboratory at the College of Physicians and Surgeons, New York, by Warren P. Lombard, M. D.; Bacteriology, by W. Watson Cheyne, M. D.; The Surgery of the Pancreas, as Based Upon Experiments and Clinical Researches, by N. Senn, M. D.; A Short Account of the Disease called "Ainhum," with the Report of a Case, by Francis J. Shepherd, M. D.; A Clinical Study of Cerebral Localization, Illustrated by Seven Cases, by Henry Heen, M. D.

MASSAGE AS A MODE OF TREATMENT.—Views are expressed by Dr. Murrell on this subject which will be appreciated by, and which will benefit, every thoughtful physician. The author gives an amusing exposition of the ignorance of what really constitutes the process of massage. "A short time ago in asking a medical friend if he used massage in his practice, he replied: 'Oh, yes, a great deal; my butler does it.' After that I should not have been surprised to hear that the electrical treatment was conducted by his footman, and that the kitchen maid undertook the obstetric cases." Upon this the *Lancet* learnedly comments that: "Skill in the proper performance of massage takes at least two years to acquire, and then it is necessary that the learner brings to his or her task a fair education and a certain amount of refinement, sound health, muscular strength, cheerful temperament, a soft and pliant but strong hand, and some acquaintance with anatomy and physiology. It is as absurd to suppose that 'rubbing' or 'champooing' is massage, as it is to say that a daub of paint is a work of art. The duration of a sitting is another point on which the community requires enlightenment. On the general principle that you cannot have enough of a good thing, the general impression is that each sitting should last an hour. Twenty minutes should, on the contrary, be considered a long sitting. The physiological action of massage is a subject that still requires accurate investigation, but there is little doubt that it improves the appetite and nutrition of even healthy individuals."

NEW PUBLICATIONS.

LECTURES ON SYPHILIS. Delivered at the College of Physicians and Surgeons. By G. Frank Lydston, Late Resident Surgeon at Charity Hospital, and at State Emigration Refuge and Hospital, New York City; Lecturer on the Surgical Diseases of the Genito-Urinary Organs, and on Venereal Diseases, in the College of Physicians and Surgeons; Professor of the Principles and Practice of Surgery in the North-western College of Dental Surgery; Attending Surgeon to the Genito-Urinary and Venereal Department of the West Side Dispensary; Member of the Chicago Medical Society, of the Chicago Pathological Society, etc., etc. Reported by William H. Walker, A. M., M. D., Attending Physician to the West Side Dispensary. 12mo: one hundred and thirty-four pages.. Chicago: A. M. Wood & Company, 1885.

The nine lectures which make up this small work were originally published in the *Western Medical Reporter*. For convenience they have been collected and republished. The author's aim has been to present to the student a plain and practical idea of the subject of syphilis. In the matter of pathology the author makes no claim to originality, but presents the views that are now generally accepted by all advanced investigators of the subject. Extensive experience in hospital and dispensary practice has enabled Dr. Lydston to make valuable deductions, which he presents in a clear and forcible style. He believes that the "primary syphilis" is "local syphilis," that the syphilitic germinal cells slowly traverse the lymphatics and gradually make their way to the general blood current; the particular morbid action of the cells is an abnormal tendency to proliferation, concluding that all pathological manifestations are localized cell accumulation and proliferation, and in this light the treatment consists in producing fatty degeneration or retrograde metamorphosis in the hyperplastic materials. Being a logical thinker and an earnest teacher, Dr. Lydston's lectures will be found valuable reading.

BOOKS AND PAMPHLETS RECEIVED.

"Finger Injuries." By J. T. Woods, M. D., Toledo, Ohio.

"Report of Proceedings of the Michigan State Board of Health." Regular Meeting, October 1, 1886.

"Transactions of the Pere Marquette Medical Society." At their meeting, August 10, 1886. Manistee, Michigan.

"Sanitary Progress in Michigan." An Address Delivered Before the Reunion of the Michigan Legislative Association at Lansing, Michigan, June 11, 1886. By James Hueston, M. D.

"The Annual Report of the Commissioner of Pensions to the Secretary of the Interior for the Year Ending June 30, 1886." Washington: Government Printing Office, 1886.

"Intubation of the Larynx." Read before the Detroit Medical and Library Association. By G. C. Jennings, M. D., Professor of Chemistry and Diseases of Children, Detroit College of Medicine. Reprinted from the *American Lancet*, November, 1886. Detroit, 1886.

"The Physiological, Pathological and Therapeutical Effects of Compressed Air." By Andrew H. Smith, M. D., Late Surgeon to the New York Bridge Company (Caisson Work); Physician to the Presbyterian Hospital, New York, etc. Detroit, Michigan: George S. Davis, 1886.

"Diseases of the Nerves, Muscles and Skin," being Volume III of Dr. Hermann Eichhorst's Hand-book of Practical Medicine, and Volume X of Wood's Library of Standard Medical Authors, 1886 (consisting of twelve volumes, price, $15.00). Sold only by subscription. William Wood & Company, New York.

"Ethics of Female Sterility." By A. Reeves Jackson, A. M., M. D., Professor of Gynæcology in the College of Physicians and Surgeons of Chicago; Fellow of the American Gynæcological Society, British Gynæcological Society, Chicago Gynæcological Society; Chief of the Gynæcological Department, West Side Free Dispensary, etc., etc. Reprinted from *The Physician's Magazine* (Volume I, Number III), Philadelphia.

"Method in Medical Study." By Charles H. May, M. D., Instructor in Ophthalmology, New York Polyclinic; Clinical Assistant in the Department of Diseases of the Eye and Ear in the College of Physicians and Surgeons, New York. Reprinted from the *New York Medical Journal* for September 18, 1886.

"An Address in State Medicine." Delivered at the Thirty-Seventh Annual Session of the American Medical Association, in Saint Louis on May 6, 1886. By John H. Rauch, M. D., of Illinois, Chairman of the Section on State Medicine. Reprinted from the *Journal of the American Medical Association*, June 12, 1886. Chicago, 1886.

"The Exploration, Excavation and Illumination of the Interior of Bones in Any Part of the Body." Addressed to the Clinical Society of the New York Post-Graduate Medical College and Hospital. By Milton Josiah Robberts, M. D., Professor of Orthopædic Surgery and Mechanical Therapeutics in the New York Post-Graduate Medical School and Hospital, etc., etc.

"Report on Rhinology: The Treatment of Nasal and Pharyngo-Nasal Catarrh." By J. Addison Stucky, M. D., Lexington, Kentucky, Surgeon to Saint Joseph's Hospital; Member Kentucky State Medical Society; Vice-President American Rhinological Society. Reprinted from the *Cincinnati Medical and Dental Journal*, October, 1886. Lexington, Kentucky: Acme Printing Company, 1886.

"The Mechanism of Indirect Fracture of the Skull." By Charles W. Dulles, M. D., Fellow of the College of Physicians and of the Academy of Surgery of Philadelphia; Surgeon to the Out-Patient Department of the Hospital of the University of Pennsylvania and of the Presbyterian Hospital in Philadelphia. Reprinted from the "Transactions of the College of Physicians of Philadelphia," February 3, 1886. Philadelphia: Wm. J. Dorman, Printer, 1886.

"A Manual of Animal Vaccination, Preceded by Considerations on Vaccination in General." By Dr. E. Warlomont, Member of the Royal Academy of Medicine of Belgium; Founder of the State Vaccine Institute of Belgium; Director of the Institut Vaccinal de Belgique, at Brussels, etc. Translated and edited by Arthur J. Harries, M. D., Senior Assistant Physician and Joint Lecturer to Saint John's Hospital for Diseases of the Skin; Consulting Physician to the Association for the Supply of Pure Vaccine Lymph; Honorary Secretary to the Willan Society of London; Treasurer to the Sloane Society; Late Honorary Medical Officer to the Holloway and North Islington Dispensary, etc., etc. With an Appendix, showing the Results of Re-Vaccination and the Comparative Utility of Animal Vaccine. Philadelphia: Published by John Wyeth & Brother, 1412, 1414 and 1416 Walnut Street, 1886.

"The Surgery of the Pancreas, as Based upon Experimental and Clinical Researches." By N. Senn, M. D., of Milwaukee, Wisconsin; Attending Surgeon to the Milwaukee Hospital; Professor of the Principles and Practice of Surgery and of Clinical Surgery in the College of Physicians and Surgeons, Chicago, Illinois. Reprinted from the "Transactions of the American Surgical Association," April 29, 1886. Philadelphia: Wm. J. Dorman, Printer, 1886.

"The Physician's Leisure Library: Practical Guide in Antiseptic Midwifery in Hospitals and Private Practice." By Henry J. Garrigues, A. M., M. D., Professor of Obstetrics in the New York Post-Graduate Medical School and Hospital; Visiting Obstetric Surgeon to the New York Maternity Hospital; Obstetrician to the New York Infant Asylum; Gynæcologist to the German Hospital and Dispensary in the City of New York; Fellow of the American Gynæcological Society; Fellow of the New York Academy of Medicine, etc.

"Eighth Annual Report of the State Board of Health of Illinois. With an Appendix Embracing—(*a*) Report on Disinfection and Disinfectants; (*b*) Coast Defense Against Asiatic Cholera; (*c*) Report of Proceedings, Sanitary Council of the Mississippi Valley; (*d*) Meteorological Tables; (*e*) State Sanitary Survey and House to House Inspection; (*f*) Vital Statistics of Illinois and Coroners' Inquests; (*g*) Medical Education in the United States and Canada from 1765 to 1886." Springfield, Illinois: H. W. Rokker, State Printer and Binder, 1886.

"A Laboratory Guide in Urinalysis and Toxicology." By R. A. Witthaus, M. D., Professor of Chemistry and Physics in the Medical Department, University of the City of New York; Professor of Chemistry and Toxicology in the Medical Department, University of Vermont; Professor of Chemistry and Toxicology in the Medical Department, University of Buffalo; Professor of Pharmaceutical Chemistry in the Department of Pharmacy, University of Buffalo; Chemist to the City of Buffalo; Chemist to the New York State Dairy Commissioner; Member of the American Chemical Society, and of the Chemical Societies of Paris and Berlin, etc., etc. New York: William Wood & Company, 57 and 58 Lafayette Place, 1886.

"The Physician's Pocket Day Book," designed by C. Henri Leonard, A. M., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology in the Michigan College of Medicine; Member of the American Medical Association, Wayne County Medical Society, ètc., etc. Accomodates daily charges for twenty-five or fifty families weekly; has complete obstetrical record for ninety-four cases, and monthly memoranda for debit and credit cash account. Price, $1.00; your name and year on the side in gold leaf, $1.25; name, town, state and year, $1.50. Copyright, 1878. Issued annually. The Illustrated Medical Journal Company, Detroit, Michgan.

MEDICAL DIGEST.

BELLADONNA IN THE STERILITY OF FEMALES.

Dr. J. H. Jones, in a recent article, states: "There are few drugs which exhibit so pronounced a predilection to act upon certain structures of the body as belladonna. Among its favorite tissues those of the female sexual organs may be mentioned. Its employment is followed by more or less benefit in every disease to which these parts are liable. I suppose it has fallen to the lot of every practitioner to be consulted by married women who never were pregnant, as to the cause of their barrenness. Apparently they enjoy the best of health, and have never suffered from any irregularity of the sexual apparatus. To such I have, on several occasions, prescribed belladonna internally, and have found that after taking the medicine for some weeks they became pregnant. I have seen this happen so often that I am constrained to regard the occurrence as something more than accidental. I shall not venture to theorize upon its action, but will merely mention that I have observed that the external genitalia becomes more relaxed, and the os and cervix uteri somewhat softened and pliable, during the treatment.—*New York Medical Journal.*

COLD APPLICATIONS TO THE PRÆCORDIA IN FEVER.

Grigorovorich arrives at the following conclusions regarding the effect of applying cold water to the region of the heart, based on a series of experimental observations made in the Rostoff military hospital:

(1) The cold undoubtedly reaches the heart itself, and thus produces an effect on its action.

(2) This effect is particularly noticeable when the cardiac beats are increased in frequency in consequence of a high temperature quickly obtained, and where a certain degree of sensitiveness to a high temperature exists.

(3) The effect of cold is not marked at the end of a prolonged attack of fever, pathological changes having by that time probably become established in the cardiac muscle.

(4) The local application of cold is only capable of protecting the heart muscles from the effects of a high temperature, when it is applied assiduously from the commencement of the disease.

(5) Under its influence the action of the heart improves, the number of beats diminishes, while their force and amplitude increase.

(6) Cold applied to the region of the heart diminishes the gravity of the typhoid condition, and favorably influences the respiration.

(7) With respect to the effect of cold applied to the region of the heart, on the course of the general temperature, Grigorovorich cannot at present express a decided opinion, as he did not investigate the question; but in the results which he obtained, indications may be found of the possibility of its causing some diminution of the temperature.—*Practitioner.*

THERAPEUTIC PROGRESS.

INGLUVIN.—This preparation possesses undoubted merit. It is valuable in indigestion, sick stomach, nausea, caused by debility of that organ. For vomiting in pregnancy it is claimed to be a specific. It may be prescribed in the same manner, dose and combinations as pepsin.

SALICYLATE OF IODA FOR FETID URINE.—The late Dr. Fagge, in his work on the "Principles and Practice of Medicine," states: That the tendency (of urine in paraplegia) to putrefaction may be completely checked by the administration of salicylic acid or some other antiseptic medicine by the mouth.

COLLYRIUM FOR STRABISMUS.—Dr. Boucheron recommends: Sulphate of atropine, five centigrammes; distilled water, fifteen grammes—three drops to be instilled into the eye, at the commencement of convergent strabismus, and while it is still intermittent. Improvement takes place in a few weeks.

Tannin for Ingrowing Toe-Nail.—The application of a concentrated solution of tannin to the toe, several times a day, is said to quickly lessen the pain, and after a few dressings the patient is able to move about with comfort.

Piscidia Erythrina as a Uterine Sedative.—One hundred and six cases are reported by Dr. Lessona in which tincture of piscidia erythrina was given to the amount of from seventy-five to two hundred and twenty-five minims within an hour or an hour and a half, on account of after pains or threatened abortion. Favorable effects were produced in seventy-one per cent. of the cases.

An Application for Painful Dental Caries.—The following formula is recommended:

℞.	Dry alcoholic extract of opium	1 part.
	Camphor	1 part.
	Peruvian balsam	1 part.
	Mastic	2 parts.
	Chloroform	20 parts.

A pellet of cotton soaked in the solution is to be introduced into the cavity.

Solanine: Its Analgesic Properties.—Solanine belongs to the class of poisons which include eserine, pilocarpine, atropine, etc., the first physiological effect being to paralyze the nerve terminals of the non-striated muscular fibres. There are, however, certain differences in the particular action of solanine which Dr. Genevile proposes to utilize in medicine. In doses of from one to three grains its action is confined to the medulla and cord, but in larger doses the cerebral cortex is also affected, the symptoms being vertigo, heaviness and noises in the ears. Respiration is rendered deeper and slower; the pulse is not effected when the drug is given in medicinal doses. Dr. Genevill has found solanine of the greatest service in the treatment of sciatica and rheumatic neuralgia in doses of from three to four grains daily by the mouth or hypodermically. It is useful in prurigo, cystitis, and in nervous affections where restleness and insomnia are prominent symptoms. Good results have followed its administration in acute dyspepsia and gastritis, in obstinate vomiting of pregnancy, in bronchitis, bronchial asthma, cardiac asthma and emphysema. Its use is not attended by the same inconvenience as morphine and atropine, and in the place of the former it is of special service in children.

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ORIGINAL ARTICLES.

ACUTE SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.

BY CHARLES J. LUNDY, A. M., M. D.,
Professor of Diseases of the Eye, Ear and Throat in the Detroit College of Medicine;
Ophthalmic Surgeon to Harper Hospital, etc.

Acute suppurative otitis media is a disease with which every physician is more or less familiar. It occurs in all classes of society, among the rich as well as among the poor, in the young and in the old, in all places, in all climates, and at all seasons. Statistics show that it occurs from five to eight times in every one hundred cases of ear disease. Its beginning is not unlike that of an acute catarrh of the middle ear, but it runs a more severe course, during which pus is formed in the tympanic cavity. This pus is evacuated or discharged through the drum membrane, which gives way as the result of softening and ulceration, together with the pressure exerted by the pent-up discharges. The disease may prove to be self-limited, and, even without treatment, the discharge may cease, the inflammation may subside, and the opening in the membrana tympani may heal up, and the parts, as well as the hearing, may return to a normal condition. But if not properly treated it may terminate in chronic suppurative otitis media, or it may, in rare instances, lead to cerebral complications and death. The disease does not always present the evidence of being severely acute in character, for, now and then, we meet cases in which there has been little or no pain and little to mark the presence of an inflammation, till the purulent discharge flows from the auditory canal. The duration of the disease varies from a few days to several weeks, or until the chronic state supervenes.

In studying the pathology of this disease, it is observed that the first departure from health is one of hyperæmia, which in a very short space of time reaches a very general and a very marked congestion of the mucosa that lines the whole tympanum. In this congestion not only do the capillaries and venules, but also the arterioles, take part. From the intensity of the congestion there may occur small points of hemorrhage, due to the giving way of some minute vessel; and this will account for the fact that sometimes the first discharge is blood or bloody serum. The escape of cells and serum from the distended vessels, with more or less infiltration of the mucosa, is the next step. The thin, delicate lining of the tympanum, which in the normal condition is less than one-thirtieth of an inch thick, becomes greatly swollen, and in some cases the drum-cavity is almost completely filled by this swollen, infiltrated mucosa, which at points, here and there, may be denuded of its epithelium. The tubular and racemose glands become much enlarged and even cyst-like, and pour forth a large quantity of tenacious, sticky mucus. The excessive secretion from these glands, and from the whole lining of the tympanum, together with cellular elements, epithelial cells, serum and escaped blood-corpuscles, not only fill the tympanum completely, but cause the drum membrane to bulge outward. If no means are instituted to check this inflammatory process, it goes on to the second stage, or the stage of suppuration. The membrana tympani is early involved in the general congestion and inflammation. It soon assumes a bright pinkish hue, with engorged vessels running across it near the malleus handle; and this bright pink quickly passes into an intense red. Finally it becomes more or less soddened, infiltrated and thickened.

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In the normal condition the membrana tympani is about as thick as thin letter-paper or fine gold-beater's skin; but in disease it is usually infiltrated, and may be swollen to several times its normal thickness. In this condition its resisting power is greatly diminished, and it soon yields to the pressure from within the tympanum, and the discharges escape into the external auditory canal.

The lining of the mastoid cells is more or less congested in all severe cases of suppurative otitis media, and in some cases severe inflammation and abscess occur in this portion of the auditory apparatus, but they cannot be considered in this short paper. The Eustachian tube is probably always in a state of acute catarrh.

The causes of acute suppurative inflammation of the middle ear are numerous. They may be classed under two general heads—predisposing and exciting. Certain constitutional conditions, such as scrofulosis, tuberculosis, syphilis, etc., may be considered among the predisposing causes, but to what extent they do really predispose patients to attacks of this form of ear disease it is difficult to tell. The exciting causes are numerous, and I quote the following from Professor Knapp's report of one hundred and eighty-two cases, to show the relative frequency with which it occurs as the result of these different causes. My own experience corresponds closely with Professor Knapp's, except as regards sea-bathing—bathing in fresh water with no surf not being a very frequent cause of this disease. His report of one hundred and eighty-two cases is as follows:

Pharyngitis and rhino-pharyngitis	68	cases.
Coryza and assignable exposure	48	"
Sea-bathing	16	"
Scarlet fever	13	"
Diphtheria	4	"
Measles	3	"
Pneumonia	3	"
Improper use of nasal douche	3	"
Cold water and alcohol poured into the ear	2	"
Eczema of external ear	1	"
Mumps	1	"
Varioloid	1	"
Causes unknown	19	"

We see that of the one hundred and eighty-two cases, one hundred and sixteen, or more than sixty-three per cent., were the result of exposure to cold or atmospheric conditions, manifesting themselves in inflammation of the nasal, or naso-pharyngeal, mucous membrane. Owing to the continuity of structure, this inflammation passed along the Eustachian tube to the lining of the tympanic cavity and involved this delicate structure. Long after the inflammation of the nasal or naso-pharyngeal mucous membrane subsides, the suppurative process may continue in the ear, and this is very apt to be the case where improper treatment, or no treatment, has been instituted, and, under any circumstances, when the disease occurs in connection with scarlet fever.

Acute suppurative otitis media prevails to a much greater extent during the winter and spring than in summer. From December 1 to June 1 nearly twice as many cases occur as during the period from June to December. It is much more prevalent in early childhood than at any other period. More than one-half of all the cases occur before the end of the tenth year. The greater liability to catarrhal affections of the air passages in children, the greater prevalence of eruptive fevers, and, possibly, dentition, may help to account for the frequent occurrence of this disease in early life.

The diagnosis of acute suppurative otitis media is not difficult. The signs and symptoms differ somewhat in the different stages, and it will be better to consider them separately. The subjective symptoms in the first stage will usually be, tinnitis aurium, a sense of fullness in the ear, impaired hearing, a throbbing sensation synchronous with the heart's beat, and pain which may vary in degree from quite slight to very severe. The last symptom is the most important, for usually it is the pain—the *earache*—which leads the patient to seek relief, or attracts attention to his condition. This pain is nature's language—nature's warning—and if we interpret it aright it may prove a blessing to our patient. "Earache" seldom occurs except in connection with, and as the result of, inflammation in the tympanic cavity. How comes it that an inflammation of the mucous membrane of the ear-drum should be attended with severe pain—sometimes excruciating pain—while inflammations of mucous membranes elsewhere are comparatively painless? It must be remembered that the tympanic mucous membrane is intimately associated with the periosteal covering of the bony walls of the tympanum. Von Troeltsch has said that in every case of severe acute inflammation of the tympanic cavity we have virtually a periostitis; and while this may not be strictly true, it shows the views which this great aurist held upon the subject.

The patient will experience more or less constitutional disturbance, and in severe cases will be feverish, irritable and restless. Vertigo and nausea may show themselves in some instances, and, in the early stage, will probably depend upon the intra-tympanic pressure. The objective signs in the first stage will consist mainly in the congested, reddened appearance of the drum membrane, the absence of the umbo or light spot, and perhaps a bulging of the drum membrane. Just previous to the rupture of the membrane it will often look soddened and necrotic around the part at which the perforation is about to occur. The external auditory canal is frequently congested and reddened for some distance from the drum membrane. The patient's temperature will frequently be elevated, and there will also be evidence of nasal or naso-pharyngeal inflammation. The disease may reach the second stage in the course of a very few hours, and perforation of the drum membrane and discharge of pus, serum, mucus, etc., may take place before anything can be done to relieve the patient. The presence of discharge in the auditory canal and the evidence of a perforation in the membrana tympani, together with the history of the case, will leave little doubt as to the nature of the trouble. The constitutional disturbance may continue for some hours or even days, and the subjective symptoms mentioned in the first stage may also continue, but in the vast majority of cases pain diminishes within a few hours after perforation of the membrana tympani takes place.

It should be remembered that convulsions and delirium are not very infrequent in connection with this disease when it occurs in young children. In infants too young to give expression to their feelings, the head may be rolled from side to side, and the little hand will often be carried to the ear and side of the head. In such cases the diagnosis of meningitis, or other intra-cranial affection, is often made, when inspection of the ear would reveal the true nature of the case. It should not be forgotten, however, that we may get cerebral complications, and that such complications may occur in adults as well as in children. The case of the late, lamented Dr. Farrand illustrates this point very forcibly.

The prognosis in acute suppurative inflammation of the middle ear will depend upon circumstances. In some of the more violent cases occurring in the course of scarlet fever, the disease is quite likely to run into the chronic stage if the patient survive, and especially is this the case if prompt and energetic measures are not taken in the matter. When the disease occurs in phthisical or tubercular patients, or in persons saturated with the virus of syphilis, the prospects of quickly controlling the disease and making a speedy cure are not good. If cerebral complications occur, or if the mastoid become seriously involved, of course the prognosis must be much less favorable than in cases where no such complication exists. On the other hand the prognosis is favorable in all uncomplicated cases, where no serious constitutional dyscrasia exists, provided always that proper treatment is begun early. I have treated a large number of patients both in private practice and in the eye and ear clinic, and for several years I have not failed to cure any case, where I could properly control the patient and where I saw the case within a week or ten days after the beginning of the attack. By this broad statement, I mean that under my care the duration of the disease in no instance was greater than four weeks. But it would be absurd to claim such magnificent results under any circumstances. For example, a patient may come once or twice a week for treatment, and in the interim the ear remains full of discharges, reeking with bacteria, and to expect any brilliant results under such circumstances would be an absurdity. According to Professor Knapp about eighty per cent. of these cases end in recovery, and while this includes all cases, even those having some of the constitutional dyscrasiæ already referred to, as well as those having mastoid complications, etc., yet I think the per cent. is too small. I am satisfied that of every one hundred cases, even including complicated cases and those occurring in patients affected with constitutional disorders, more than ninety will make complete recoveries if properly treated. About four per cent. end in chronic suppurative otitis media, and about two per cent. terminate in the death of the patient, as the result of intra-cranial or other disease.

The treatment of acute suppurative otitis media might, for sake of convenience, be considered under three heads, namely: prophylactic, abortive and curative. When considering the causes of this affection we saw that, in many cases, it was connected with, and dependent upon inflammation of the upper air passages. These being the facts in the case, it would seem but rational to prevent, as far as possible, the occurrence of the ear trouble by giving proper attention to the rhinitis, rhino-pharyngitis, etc. If the affection of the upper air passages can be treated early, properly and effectively, the ear trouble will either be entirely prevented, or its severity will be greatly modified. To attempt even an outline of the best plan of treating inflammations of the upper air passages would be entirely beyond the scope or design of this paper, therefore I must content myself with simply calling attention to this important point in connection with the prophylaxis of acute inflammations of the middle ear. The treatment of the nasal or naso-pharyngeal inflammation is of great importance even though the ear disease be already established or even if suppuration have already occurred. The abortive treatment of suppurative otitis media has reference to the prevention of suppuration after the tympanic inflammation has begun. The homely old adage that "an ounce of prevention is worth a pound of cure" can often be forcibly illustrated in the treatment of acute inflammation of the middle ear. The course of an inflammation in the tympanic cavity, no matter how severe it may be, can be greatly modified by proper treatment in the first stage. In many cases a tympanic inflammation, which would quickly pass on to the stage of suppuration, with perforation of the membrana tympani, can be arrested in the first stage if proper means are employed.

Let us briefly consider what are the best means to employ for this purpose. First in importance is local blood-letting. The application of leeches will here accomplish more than can be accomplished by them elsewhere, or in any other form of inflammation. The leeches should be applied to the tragus, for at this point much more can be accomplished than if the leeches are elsewhere applied. It were better to fill the external auditory canal with cotton before applying the leeches. Two to four leeches may be applied at a time, and the bleeding should be encouraged. The effect upon the pain is sometimes like magic. I have seen stout men, who were writhing in pain before the application of leeches, fall into a sound sleep while the leeches were yet upon the ear. Of course the patient slept because his violent pain was relieved. It will sometimes be necessary to repeat the leeching.

The aural douche is only second in importance to leeches. It has one advantage, that of availability. Leeches cannot always be had, but the hot douche can be employed at any time, day or night. With a piece of rubber tubing and a bucket of hot water any one may improvise a douche which will answer every purpose. The water should be as hot as can be borne, and after a few minutes it can be borne hotter than at first, and the temperature of the water should be kept up all through the douching process. The douching of the ear should be continued for twenty or thirty minutes, and it should be repeated at intervals of an hour or two, according to circumstances. Both the leeches and the hot douche should be employed in our efforts to abort every attack of acute inflammation of the middle ear which is likely to lead to suppuration. The use of the Politzer air-bag will often dislodge secretions which are accumulating in the ear drum, and will aid us in controlling the inflammation. When the drum membrane is bulging outward, as the result of pressure from discharges pent up within the tympanum, the membrana tympani should be incised by a Politzer or other knife, and by use of the Politzer air-bag the discharges can be forced through the incision. Incising the drum membrane should not be attempted in a hap-hazard way, and should be done only under a good light used with the aid of a reflector. Internal medication will often aid us in controlling this disease. A brisk, saline cathartic, given early, will frequently aid us in obtaining the desired result. Aconite will probably do more than any other general remedy to limit the severity of the attack. Especially will it be found useful if the ear trouble is associated with acute tonsilitis and pharyngitis. But it must be given early, if at all; and it must be given freely, if any benefit is to be derived from its use. It will not only control febrile movement, but it will have an especially good influence over acute inflammations of the tonsils, pharynx and Eustachian tube.

Probably I could select no more fitting point in my paper than this to say what *should not be done*, for it is in the first stage of acute suppurative otitis media that so much harm is done by malpractice. Strange as it may seem, physicians, who display good judgment in the treatment of other diseases, often fail utterly to use either good judgment or good sense, when treating acute inflammations of the tympanic cavity. Some of them remind one of the man who was "h—l on fits." They think all will be well if suppuration can once be established. For this purpose poultices are applied steadily until the auditory canal is so infiltered, soddened and swollen that pus cannot find its way out of the external auditory canal even if the drum membrane should perforate. Thousands of people, who, to-day, are the victims of chronic suppurative otitis media, are such because their ears were poulticed instead of being properly treated during the primary inflammation. In the sixteenth century Fallopius taught that a discharge from the ear should not be meddled with, and a century later Alexander Benedetti recommended boar's semen to be poured into the ear to cure earache, and while we, of the nineteenth century, ridicule the practice of two or three hundred years ago, yet we see much more ridiculous and harmful things done in practice every day. In the treatment of acute inflammations of the middle ear it is high time that the use of the "laudanum and sweet oil," the "goose grease" and the "poultice," as well as the "boar's semen," should be considered as relics of barbarism, and they should find no advocates in this day and age.

Supposing our efforts to bring about resolution and cut short the disease have been unavailing, or supposing suppuration has already become established, what curative measures can we employ? It should be borne in mind that many cases—a minority it is true—will get well without any treatment. Many others will get well if the parts are kept thoroughly cleansed. Still others will get well if we use simple disinfectants in addition to cleanliness. Some will need additional therapeutic measures. Of all measures cleanliness is probably the most important. Too much importance cannot be attached to this point. Cleanliness—thorough cleanliness—will do more to effect a cure than will medication. In the aural syringe, the Politzer bag and the cotton mop we have a trinity of mechanical appliances which enable us to cleanse the ear effectually. Each of these appliances plays its own important role, and neither can be wholly substituted for the other.

Disinfectants I have long regarded as of great importance in the treatment of suppurative inflammation of the middle ear. Any of the numerous disinfectants may be employed, but while the parts are yet very sensitive the less irritating ones should be selected. Boric acid, either in powder or solution, does well, as does also the peroxide of hydrogen.

Cocaine will not only act as a disinfectant, but, in strong solutions, will do much to relieve the patient's suffering. It is a popular fallacy that cocaine, poured into the auditory canal, will relieve earache under any conditions. But it should be borne in mind that, so far, all attempts to produce cocaine anæsthesia by the epidermic use of the drug have proved unavailing. Why? Because the epidermis does not permit sufficiently rapid absorption of the drug. This being the case, it must not be expected that cocaine put in the external canal will relieve the pain of an inflamed ear drum, unless the drug can come in contact with the mucous lining of the drum, which it cannot do unless a perforation of the membrana tympani have occurred. It should be used in very strong solution.

If the suppurative process persist, despite the use of disinfectants with thorough cleanliness, astringents may be employed. If granulations of the tympanic mucosa should appear they should be destroyed by caustics or other measures. Stimulating applications to the margins of the perforation in the membrana tympani often favor the closing of the perforation. If mastoid complications occur, they must be promptly and energetically treated. When the discharge has greatly diminished, and especially if the disease show a tendency to become chronic, I have frequently derived great satisfaction from the use of the so-called dry treatment. The importance of treating co-existing nasal, or naso-pharyngeal catarrh should not be over-looked. The tympanic inflammation will often be prolonged if catarrhal conditions of the nose, naso-pharyngeal space, pharynx and Eustachian tube are neglected. It will be remembered that in nearly two-thirds of all cases of suppurative otitis media the starting point is in disease of the parts just referred to, and this being the case the necessity of treating these co-existing inflammations, must be apparent to the most casual observer.

CLINICAL LECTURES.

SOME CLINICAL APPLICATIONS OF THE ANATOMY OF THE SCALP.

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REPORTED BY WILMOT F. MILLER, ANN ARBOR, MICHIGAN.

Having now studied somewhat in detail the structures which constitute the scalp, it will be my object to point out some of the surgical applications that can be made of this knowledge. You have been frequently informed that I attach no value to abstract anatomy, excepting the inherent value that without a knowledge of it there can be no applied anatomy.

The hair, which normally covers the scalp, has various economic functions: one is the important part it plays in diminishing the force of falls and blows received on the head. If, however, the blow be severe enough to cause a wound, the hair becomes a detrimental agent to the favorable treatment and prognosis of the injury. Its structure affords the best facilities for concealing septic germs and for protecting them against antiseptic agents. Before the intelligent appreciation, or any knowledge, of antiseptic measures, the use which ingenious surgeons made of the hair in treating scalp wounds, to approximate the edges, by tying locks across the wound, was condemned, because the foul decomposing mass formed by the hair, blood and serum was found to be even a greater source of irritation and inflammation and their train of dangers than the condemned suture. It is now the practice, in the light of the present knowledge of these septic dangers, to shave the head, and to treat wounds of the scalp in the same way that wounds of any other portion of the body are treated, by drawing the edges together with aseptic sutures and dressing them with antiseptic materials.

While the hair is a safeguard against wounds, the brittle skin and peculiar subcutaneous fat favor laceration. It is this friable property of these structures, in connection with the unpinging of the skull, that account for the great frequency of scalp wounds. You will recall that the fibres which constitute the matrix of this modified superficial fascia are short and arranged obliquely or nearly vertical, and cross each other as they pass from aponeurosis to integument, binding these structures firmly together. This arrangement of the fibres of the connective tissue serves to hold the blood-vessels which ramify in the fascia in a fixed position. I demonstrate to you how firmly the arteries are held in their beds; the cut ends of the vessels do not collapse and contract but stand open, which accounts for the free and persistent hæmorrhage, when these vessels are divided in the living subject; when I catch the end in the forceps the vessel cannot be drawn out beyond the edge of the wound because these arteries are not provided with a loose sheath, but the outer coat is intimately connected with the short inelastic fibres previously mentioned. This unyielding condition makes it a difficult and almost impossible task to apply a ligature to a bleeding artery of the scalp. While free hæmorrhage is thus encouraged by this arrangement, the very best provisions are made for its control. The unyielding skull constitutes a firm base upon which pressure can be made a most efficient means to control bleeding.

This strong connection of skin, fascia and aponeurosis explains why wounds of the scalp are not limited to the skin but extend through to the pericranium. The firm character of the fascia also constitutes a safe barrier against extravasation of blood and diffuse suppuration between the aponeurosis and the skin. Any transudation of serum or blood following an injury, or any subsequent suppuration, if confined to the structures over the aponeurosis, will be limited in area, and such tumefactions will be circumscribed and clearly defined, and can be freely evacuated by limited incisions through the skin.

The loose and delicate connection between the aponeurosis and the pericranium affords but slight resistance to the most extensive extravasations of blood or diffusion of pus occurring between these two structures. When a blow lacerates the aponeurosis, but does not cut the skin, the blood that escapes from a very small vessel can find its way under the tendon and extravasate over the entire skull, and may not even be confined to the region of the head, for I have shown that there are no anterior or lateral bony attachments to either the muscle or tendon fibers:

that the muscle is continuous with those of the eyelids and the nose; and the aponeurosis over the temporal region passes into a fascia which is continuous with the fascia of the neck; there is then no anatomical obstruction to the blood penetrating to the eyelids and the structures of the face and neck. In this condition you understand that the superficial structures are not involved, and as the blood-vessels which supply them with nutrition are above the aponeurosis and not subject to pressure, the vitality of these structures is not lowered. There is no breaking down or sloughing of the skin of the scalp to permit the fluid to escape so that in the case of concealed hæmorrhage, such as just described, or of deep suppuration that is produced from phlegmonous erysipelas, or may result from other causes, it requires numerous and extensive incisions to liberate the confined fluids and sloughs, and to provide free drainage. Again this loose attachment of the aponeurosis with the pericranium permits the scalp to be easily stripped from the skull, so that large flaps or even the entire scalp may be torn away by a moderate degree of violence. The numerous arteries, their widely separated sources, and their free anastomosis prevent sloughing of these flaps even when they are almost entirely torn away. No matter how irregular or badly bruised these flaps may be they should not be cut off, but when the wound is first dressed, they should be carefully cleansed and replaced with the expectation that they will revivify and unite.

The scalp being very rich in glands and follicles, is a common seat for tumors,—sebaceous tumors are the most common form, —and they often exist in large number upon the same individual. The semi-solid material which constitutes the tumor is inclosed in a cyst that is usually well defined and not closely adherent to the surrounding tissues. The removal of these tumors is a very simple matter. Transfix them with a long straight bistoury with the back held toward the skull, taking care to keep the point of the knife above the aponeurosis; the cyst wall is now easily caught between the blades of a pair of forceps, and peeled out with its contents. By this method any large vessel which might lie under the cyst is not in danger of being divided. No artery of any size passes over these tumors, so that the hæmorrhage is slight, and stops on pressure.

Vascular tumors are perhaps the next most frequent variety. They are of different kinds,—arterial, venous, and capillary. The arterial variety, or what the great John Bell called an aneurism by anastomosis, is the most formidable. These tumors are described most accurately and graphically by the Surgeon Bell in his published surgical lectures. But he would be regarded a bold and reckless surgeon, who would to-day attempt to remove one of these growths when it had attained considerable size by rapid sweeps of the knife as recommended in that work. You have seen in the clinical amphitheater the safest and most efficient method of treatment applied to these growths, namely: electrolysis. Bell points out the one remarkably anatomical peculiarity regarding these tumors—that while the amount of blood which gushes forth when the structure of the tumor is cut is most alarming, the vessels found in the sound tissue which supply these tumors are no larger than normal. All vascular and nævoid growths are erectile. When the patient is at repose they are easily reduced in size by pressure, but they expand and become tense and deep colored from strong passion or emotion.

Fatty, fibrous, and epithelial tumors, are not frequently met with on the head. Congenital cystic tumors are not common in this region. When found they are usually dermoid in character.

Tumors of the scalp, that is, those that are in the structures superficial to the aponeurosis, have one common diagnostic feature; they are freely movable on the skull, and from this fact alone are not difficult to diagnose from tumors which grow in structures under the aponeurosis. Viewed from a clinical standpoint tumors of the head are divided into two classes: those that are safely amenable to surgical treatment, and those that are not. Tumors of the head not nævoid in character, that are freely movable, are, as a rule, regarded safe growths for enucleation; but tumors in this region that are fixed, are regarded with suspicion, and their removal is not generally attempted.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

ON THE ACTION OF ANTIPYRINE IN CROUPOUS PNEUMONIA OF CHILDREN.

Dr. P. Argntinski (*Wratsch.* 1884, Number XLI and XLII) in five cases of croupous pneumonia of medium severity, has used antipyrine. The cases, mostly in well-nourished children from four to eight years of age, were observed at the Children's Hospital of the Prince of Oldenburg. With the exception of antipyrine, no medicine (not even wine) was given to the children; milk and water served as drink. The antipyrine was given in solution and was taken by the children without much reluctance. Rarely was nausea noticed and in only two cases out of more than twenty-five did vomiting follow. The appetite and digestion did not suffer any disturbance. The daily amount was given in two or three divided doses at intervals of one hour. For a child of four years 1.0 gramme (twice 0.5 gramme), for from five to eight years 1.8 grammes (thrice 0.6 gramme) was found to be a sufficient dose. The effect of the antipyrine on the temperature was ascertained by hourly tests with the thermometer, and the following results were obtained: In the course of three hours after the first administration the temperature sank below 38° centigrade, and in the course of three to nine hours more to 36° centigrade—37° centigrade. For about twelve hours the temperature remained below 38° centigrade, after which and in the same length of time it regained its former height.

The effects of the antipyrine on the temperature lasted about twenty-four hours. If larger doses than the above were given the temperature fell more decidedly, more rapidly, and the effect lasted for a longer time. Threatening symptoms never accompanied the administration; on the contrary, the subjective state and general condition of the patients after antipyrine always showed considerable improvement, so that the children made abundant assurance that they were quite well and wanted to leave their beds. Usually after the first dose of antipyrine slight perspiration occurred which lasted several hours and in no way troubled them; only once was copious perspiration observed. The number of respirations usually sank to thirty or thirty-six per minute and only with subnormal temperature in consequence of large doses of antipyrine was normal frequency of respiration noticed. Concerning the nature of the pulse, sphygmographic measurements showed the following: During and after the fall of temperature the height of the pulse waves remained unchanged; dicrotism disappeared about three hours after the first dose of antipyrine; the frequency of the pulse sank to the normal only, several hours after the first administration and very rarely did it sink below the normal. Irregularity of the pulse after antipyrine has not been noticed by Argntinski.

In conclusion, it may be mentioned that in four cases the reduction of temperature brought about by the antipyrine coincided with the final defervescence of the patient.

Argntinski has also employed antipyrine in many other diseases, and based on his experience gives several rules for dosage of this preparation. These rules, as a matter of precaution, should be followed at the first administration, thereby avoiding too vigorous action and possible collapse. Accordingly, three doses should be given in twenty-four hours; and to

Children from one-half to one year, every three hours 0.2 grammes.
" " one to three years, every two to three hours 0.3 grammes.
" " four to five years, every two hours 0.3–0.4 grammes.
" " six to eight years, every two hours 0.5–0.6 grammes.
Older children 0.6–0.75 grammes and more.

In most cases antipyrine in the above minimum doses will not produce its full effect and it will be necessary to increase the dose at the next administration or shorten the interval between the doses.

Finally, Argntinski has given antipyrine to healthy children and has discovered that it also reduces the temperature in these. For example, if a medium dose of antipyrine were given, no matter in what part of the day, the temperature remained unaffected during the remainder of the day, in the evening hours, however, it began to fall and during the night sank 1°–1.5° centigrade below the minimum usually observed for this time.—Dr. Cruse in *Yahrbuch fur Kinderheilkunde,* Band XXV, heft 1 and 2, 1886.

ON THE COMBINATION OF DRUGS.

Professor Goll (*corr.—Bl. f. Schweiz, Aertzte,* XVI, XIV, page 380, 1886) draws attention to the great value of the combination of certain drugs. Opium combined with tartar emetic increases not slightly the emetic properties of the latter (Appolzer); on the contrary the vomiting is made easier and there is less suffering, so that the violent contractions of the abdominal muscles and diaphragm become almost painless. The addition of atropin to morphine (1:15 or 1:10) in the beginning doses used hypodermically, is highly recommended to obviate the troublesome vomiting (later the morphine alone is well borne); also the mixing of opium and belladonna used in the night sweats of phthisis and in profuse sweating generally; the addition of belladonna or hyoscyamus to drastics (colocynth, aloes, podophyllin); of belladonna to quinine used for neuralgias; and lastly the combination of calomel with sodium chloride, but especially with iodide of potassium or chloride of ammonium for external use.—O. Naumann in *Schmidt's Yahrbucher,* Band 212, Number X, 1886.

COCAINE IN THE DISEASES OF CHILDREN.

In the acute coryza of suckling babies Dr. D. Semtschenko (*Wratsch*, 1885, Number 7) dropped into the nostrils, four to six times per day, two drops of a two per cent. solution of cocaine and noticed that the suckling, which before was very difficult or even impossible, was resumed with ease, five or ten minutes after making the application.

The swelling of the nasal mucous membrane was reduced, the secretions became less and soon disappeared entirely. A case of chronic coryza in a suckling child was cured almost completely in one week by this method.

As it is possible that cocaine used as above directed may sometimes reach the pharynx and cause unpleasant sensations and nausea, it is perhaps more practicable to apply it in the form of an ointment.—Dr. Cruse in *Yahrbuch fur Kinderheilkunde*, Band XXV, heft 1 and 2, 1886.

THE NATURE AND TREATMENT OF SCARLATINAL DIPHTHERIA.

"That complication of scarlet fever which often assumes the severity of an epidemic, the mortality from which is greater than from any other complication, is scarlatinal diphtheria" (Professor O. Heubner, *Ver. d. V. Congr. f. innere med. Wiesbaden*, 1886, page 374); but the chief danger is not due to a mechanical obstruction of respiration, as in the primary form of diphtheria, but to an acute or slow septicæmia which has its seat in the local lesions.

Three forms of scarlatinal diphtheria can be distinguished.

In the cases belonging to the *first, the mildest form*, small patches of thin false membrane appear during the second or third day of the disease; they are found on the more or less swollen tonsils, rarer on other parts of the inflamed pharyngeal mucous membrane and disappear in a few days; at the same time the inflammatory symptoms, as well as the occasional slight enlargement of the glands, subside. If we examine this soft, false membrane, we find that it consists partly of purulent, partly of croupous, exudate, which has passed through the loosened epithelial layers of the tonsils and in which exceedingly numerous colonies of cocci, beautifully arranged in chains (Kettenkoppen) have settled down.

Altogether different is the course upon the *appearance of septic infection*. In the *acute cases* (*gravest form*), the beginning may be as simple as in the first form or greater swelling of the pharynx with high fever and serious general symptoms may be present from the start. On the fourth or fifth day of sickness, while the palatal tissues are becoming discolored and gangrenous, a rapid increase in the swelling of the glands on both sides of the lower jaw takes place; the adjoining tissues become involved in the disease and widely spreading indurated infiltrations form. "Under high fever, rapid loss of strength and foul discharge from mouth and nostrils, the disease makes rapid progress and already at the end of the first or the beginning of the second week death steps in." These cases at times resemble the so-called septic form of primary diphtheria. At the autopsy we find wide spreading gangrene of the pharyngeal tissues, fetid infiltration of the cervical lymphatic glands, as well as of all the cellular tissue of the neck. Heubner saw this form sixteen times in eighty-eight cases of scarlatinal diphtheria.

The most numerous, lastly, is the *third form*, that of *subacute septicæmia*. Insignificant in its advance, at the fourth or fifth day the false membranes appear enlarged, isolated patches on the surface of the tonsils become discolored, the swelling of the lymphatic glands of the lower jaw increases more rapidly, renewed exacerbations of fever occur. Towards the end of the first week badly colored ulcers are formed on the discolored spots and in some parts loss of substance occurs, while at the same time a fetid odor and filthy fluid pass from mouth and nostrils. During this time changes are going on in the neck as in the second form and may lead to extensive suppuration. The termination is generally unfavorable; the sick die with pyæmic symptoms, or after a long siege go to ground under the persistent fever.

The intrinsic difference between the first form and the second and third is known to us; the latter forms depend on a secondary infection with the above mentioned cocci which were first noticed by Lœffler, and which are identical with the streptococci of Rosenbach, but must certainly not be looked upon as the specific cause of scarlatinal diphtheria.

This fact lies at the bottom of the *therapy* so warmly advocated by Professor Heubner; he has endeavored to prevent or at least to weaken this secondary infection by injecting a three per cent. solution of carbolic acid into the tonsils and is highly satisfied with the results by him obtained. The injections are begun at the third or fifth day, as soon as the false membranes thicken or other suspicious symptoms appear. The syringe of

Pravaz must be fitted with a long nozzle the point of which should have a contrivance to prevent too deep introduction of the needle. The easily performed injection should be made twice daily, throwing half a syringeful into each tonsil at an injection. In the cases of the gravest form this proceeding was usually without effect; in the third form it served a useful purpose. After two or three days the appearance of the pharynx improved much, the swelling of the glands lessened, and after four to six, or at the most, ten days, the injections could be discontinued.

Heubner has also tried this treatment in primary diphtheria but did not get confirming result, "another proof—as I think—that the two diseases are intrinsically different."—Dippe in *Schmidt's Yahrbucher*, Band CCXII, Number X, 1886.

TUBERCLE BACILLI IN THE SUPRARENAL CAPSULES DURING ADDISON'S DISEASE.

M. Goldblum gives an account of the postmortem examination of a man who for a long time had the characteristic symptoms of Addison's disease; with the exception of caseation of both suprarenal capsules, there was no evidence of tubercle in any part of the body. The complete absence of tuberculous change in all other organs induced Goldblum to examine the suprarenals for tubercle bacilli. They were found in large numbers. Goldblum has in view a more minute description of the case.—*Schmidt's Yahrbucher*, Band 212, Number X, 1886.

WASHING OUT THE STOMACH IN PERITONITIS AS PRACTICED BY KUSSMAUL.

Since Kussmaul in his clinic recommended washing out the stomach in ileus, practicing physicians have had abundant opportunity to test the great value of the proceeding. There are many publications relating to the successful application of the method in ileus, etc. Professor Senator relates that he tries washing out the stomach in peritonitis accompanied with meteorism of a high grade. In consequence of this I employed the method in two cases of acute peritonitis accompanied with severe tympanitis, and will relate the cases as a contribution on the subject of this method of treatment. The cases are also worth describing because, both being operations for irreducible hernia, a favorable result was obtained after the disappearance of the acute peritonitis following the operation.

Case I.—On November 9, 1885, I was called to the cottager C. K. Kontopp, Grünberg circuit. He stated that previous to November 5 he could always reduce the hernia, situated on the right side, but on this day he noticed that it could not be reduced. I found a tumor the size of a pigeon's egg, which I could not push back into the abdominal cavity while the patient was under an anæsthetic. Since the 5th of November there was vomiting and suppression of stools. On the following November 10, with the kind assistance of Dr. Marseille, of the Züllichau regiment of lancers, I performed the operation. Having satisfied myself that the difficulty was not due to narrowing of the opening into the abdomen, I opened the hernial sac, cutting carefully through layer after layer of tissue. In manipulating the tumor I noticed that I could reach the inguinal canal. In the hernial sac only a lump of omentum was found. Dr. Marseille now stretched the walls of the hernial sac, and after separating the adhesions between the neck of the sac and the lump of omentum, I pushed the latter back into the abdominal cavity. The surface of the wound was now douched off with dilute carbolic acid solution, the edges of the wound united by means of three sutures, and a drainage tube laid into each end of the incision. Dressed with iodoform gauze, covering well the upper part of thigh and adjoining abdominal region.

November 10: Dressing renewed, drainage tubes removed, wound washed with four per cent. solution of boracic acid, and, four times daily, thirty drops of simple tincture of opium given; the same treatment on November 12 and 13, and on November 14 I removed the sutures; the wound closed by first intention. Operation on November 10 lasted two hours.

On November 14 acute peritonitis developed, starting in the ileocæcal region about where the replaced piece of omentum might lie. There was tympanitis, which during the night spread over the whole abdominal region. Pain not great, but continuous hiccough tormented the patient. Bags of ice were kept over the abdomen and large doses of opium given. Since by the 17th of November the tympanitis was not reduced any, the distension of the abdomen unbearable, and large doses of opium had no more effect, about 1 o'clock in the night I washed out the stomach for the first time. There had been no more vomiting since the operation. I removed immense quantities of the familiar greenish masses, and continued the washing until the water flowed off clear. The patient obtained some relief from this operation, and a dose of thirty drops of simple tincture of opium had its full effect, he being able to sleep for some time. From November 19 to November 21 I continued washing out the stomach three times daily, and by November 24 the tympanitis had almost completely disappeared. On November 25 the bowels moved for the first time since November 5. The patient entirely recovered.

Case II.—Mrs. Mot, of Polke, Grünberg circuit, aged fifty years, while leaving Boyadel began to feel a severe pain in the right inguinal region. In the afternoon she began to vomit. From Saturday, December 26, to Monday, December 28, at which time I first saw the patient, constipation. My attempt to reduce the hernia under an anæsthetic was without success. Pain unbearable, for which 0.02 grammes of morphine were injected subcutaneously. On December 29, with the friendly assistance of Dr. Cohn, of Unruhstadt, I performed the operation. I hesitated at first to place the blackened intestine back into the abdominal cavity, but finally pushed it back, previously washing it with solution of carbolic acid. Wound treated as in Case I, and closed by first intention in five days. Bowels moved January 2.

On January 6 acute peritonitis set in. Thinking that the peritonitis originated in the abdominal wound, and with the intention of seeking out the blackened intestine after enlarging the incision, I opened the closed wound, and now, however, while washing out the wound, I saw that the blackened intestine had grown on to the abdominal wall and did not obstruct the hernial opening. I again closed the wound.

The tympanitis and troublesome hiccough not being relieved by January 7, I began to wash out the stomach daily, following each time with thirty drops of simple tincture of opium. On the evening of January 10 the distension of the abdomen began to diminish and the hiccough was only occasional. Already I believed that, in spite of the black discoloration, the intestine had regained its normal condition, when on January 14, two weeks after the operation, sudden collapse set in and a small quantity of fecal matter discharged from the wound in the abdominal wall. The patient soon rallied, however, and on January 25, on which day I saw her for the last time, I found her sitting up out of bed. According to her statement, there is only slight discharge of intestinal matter from the fecal fistula, the greater quantity passing per *vias naturales.*

Both patients were operated on and treated at their homes. In both cases I washed out the stomach to lessen the burdensome tympanitis. Professor Ewald thinks the relief obtained from the practice in ileus is due to the increased peristaltic action produced. In peritonitis we seek to prevent peristaltic action by giving large doses of opium; consequently, the proceeding of washing out the stomach would seem to be contraindicated. Soon after the first washing out, however, I discovered wherein lay the advantage of the practice; while doses of opium (opium powder, 0.05 grammes, and thirty to forty drops of simple tincture of opium) before the proceeding were wholly without effect; after the proceeding the drugs acted, the pain ceased, the troublesome hiccough lessened, and even sleep followed. By washing out the stomach we remove the constantly accumulating grass-green masses, which, even when there is vomiting, are not wholly evacuated, and make the administration of opium illusory. The patients always felt exceedingly relieved and requested repetition of the washing out. Further trials will determine the value of washing out the stomach in peritonitis.—Dr. B. Lewin in *Berliner Klinische Wochenschrift*, Number XLIV, 1886.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY WILMOT F. MILLER, CLINICAL CLERK.

EMPYEMA WITH NECROSIS OF RIB; EXCISION OF RIB: RECOVERY.

John B., aged nineteen. Admitted to hospital October 1, 1886.

Parents both living and in good health. Aunt on mother's side died of consumption.

In February, 1886, while working in the lumber woods of Michigan, he contracted a cold, which was followed in a few days by a severe attack of pleurisy. The pleuritic pains were exceedingly severe for twelve hours. Pneumonia of the left lung supervened. About five weeks after the onset of the attack, the left side of the chest began to distend, and a sensitive spot appeared on the thoracic wall of the axilla. Poultices were applied to the side of the chest, and in a few days a hard swelling was noticed near the nipple. This was lanced by the attending physician and about three quarts of dark, fœtid pus were evacuated. Since then more or less unhealthy pus has continued to discharge from the opening. Some time after another swelling formed, and was lanced, the opening being made above and to the outer side of the nipple, but there was very little pus discharged.

The patient is greatly reduced, hectic and anæmic. Strength gradually failing; appetite poor; tongue thickly furred. The left side of the chest is depressed, and does not expand on inspiration. Two sinuses exist, one opening below, the other to the outer side of the nipple; from both a scant, foul discharge escapes.

October 17: Since date of admission the patient has received treatment in the medical clinic, but not having improved, was turned over to the surgical for operation.

October 18: Patient examined at clinic. A probe passes through one of the sinuses into a large, deep cavity; in the other sinus the probe comes into contact with dead bone. Diagnosis:—Empyema and necrosis of rib.

Operation.—Patient placed under the influence of chloroform. A semi-circular incision, convexity of flap anterior, was made under the nipple, involving the sinuses. The flap was dissected from the chest, exposing the fifth, sixth and seventh ribs. The sixth rib was necrosed, and about one inch and a half of the bone was removed. More than a quart of most offensive pus welled up and flowed from the opening, although the cavity had been washed out thrice daily until the solution came away clear, during the time the patient was in the medical clinic. After the pus had been thoroughly drained out, there was free hæmorrhage into the abscess cavity. It was obstinate, and was first thought to be from the divided intercostal artery. It was bright-colored and very free in quantity, and was found to come from some abrasions on the rough granular surface of the abscess. The chest was repeatedly packed with sponges, but the pressure thus provided failed to control it, when the cavity was douched with hot water, which soon stopped the bleeding. The heart was plainly seen beating in its sac, and its action was greatly stimulated by the hot water coming in such close contact with it. After the hæmorrhage was controlled the cavity was cleansed with carbolic solution.

October 25: Patient presented at clinic. Since the day of operation the cavity has been washed out night and morning with carbolized water. The wound is covered with healthy granulations. The discharge is gradually diminishing in quantity and has lost its fœtid odor. His general health has greatly improved; he feels well, and is gaining strength.

October 30: Continues to progress favorably in every respect. Skin-grafting commenced, to assist in the closure of the wound.

November 11: Wound nearly healed. General health good; strength restored. Dismissed.

NOTE.—Temperature, which had been constantly above 100°, and at times 103°, did not go above 100° after the operation.

PARTIAL ANKYLOSIS OF ELBOW.

C. H., aged twenty-six; farmer. Admitted March 29, 1886.

Was treated in the hospital during the winter of 1882 for disease of the knee-joint. Returns for advice and treatment for partial ankylosis of his right elbow. He gave it a wrench last November while climbing down from a hay-loft. The joint was not painful except when making the movements of pronation and supination, and this not severe enough to prevent him using the arm, which he continued to do. He used a liniment, and had it bandaged at a right angle, in a manner to permit of some movement but not full flexion or extension. Six weeks after the injury some effusion and swelling took place about the joint, which remains. Extension and flexion greatly diminished.

March 30: Adhesions broken down, with the patient under the influence of chloroform. Daily passive movements were ordered.

April 8: There has been much improvement from passive movements and massage. Patient left, with instructions to have treatment continued.

ABSCESS OF TONGUE.

H. P. K., aged forty-five; farmer. Admitted November 3, 1886.

Two months ago glands in his neck commenced to enlarge, and at the same time the posterior part of his tongue became swollen. Local applications of iodine were made, but without effect. General health good. The posterior part of his tongue is tense and swollen, interfering with articulation and deglutition. It is tender and painful on pressure.

November 4: Clinic:—Diagnosed abscess of tongue. Lateral incision made through tongue from floor of mouth into the swelling. A small quantity of pus evacuated.

November 6: Swelling greatly diminished. Wound closed. Patient, wanting to go home, is dismissed.

November 19: Patient writes that the swelling continues to grow smaller. No trouble in speaking or swallowing.

GENERAL CORRESPONDENCE.

PARIS LETTER.

PHOSPHATIC CALCULUS—ORTHOPÆDIC RESECTIONS—GRÉHANT ON THE MEANS OF PREVENTING ACCIDENTS FROM SUFFOCATION WHILE DESCENDING INTO WELLS —M. QUINQUAND ON THE REACTION OF URINE CONTAINING ALBUMINOID OR SIMILAR BODIES—MYOCTONINE.

Dr. Arnozan, in the *Journal de medecine de Bordeaux,* communicates an interesting case concerning sulphate of lime. A child fourteen years old, suffering from coxalgia, was subjected for six months to a treatment of the *solution Coirre,* administered in doses of two spoonfuls a day. This preparation contains hydrochloro-phosphate in the proportion of one gramme in twenty grammes. The patient had three nephritic colics, at intervals of a few days, characterized by vomiting and slight renal pains. Three small calculi were passed during micturition. The phosphatic treatment was immediately suspended. No fresh nephritic colics have appeared, nor any signs of renal lithiasis for the last three months. The coxalgia is improving, and there are no lesions of the internal organs. The largest of the three calculi passed by the patient was examined. It was about the size of a hemp seed, of a greyish white color, rough surface, and weighed about twenty-five milligrammes. Apart from traces of organic matter, it was entirely composed of phosphate of lime. This composition is somewhat exceptional. Phosphates are not rare in renal concretions, but they do not exist alone, and are generally found in conjunction with uric acid or uratic salts. In the present case the phosphate of lime was the sole mineral element of the calculus. From an etiological point of view it is impossible not to attach blame to the treatment administered to the patient. The composition of the calculus examined, its formation in a child without any hereditary predisposition whatever to gravel, it having absorbed a considerable quantity of phosphate, the cessation of the nephritic colic immediately after the use of this medicament was suspended; all these circumstances tend to condemn the treatment. Dr. Arnozan remarks that the immobility of the patient was conducive to lithasia; one single fact must not form an argument against phosphatic treatments which are so beneficial in many cases. This experience suggests that the examination of the urine of patients subjected to phosphatic treatment might give valuable indications of the time at which the treatment should be suspended or ceased, and that, in cases of patients kept in a state of immobility more especially, it might be advisable to substitute phosphate of soda and potassium for calcareous phosphates.

At a meeting of the recent Surgical Congress at Paris, M. Lagrange (of Bordeaux) referred to two orthopædic resections he had made. It was adopted in one case for a former pathological luxation of the hip, ensuing after scarlatina with arthritis. In the second case resection was performed for traumatic arthritis of the elbow. The patient was thirty-five years of age. He had been shot in the articulation of the left elbow. Partial resection was first made in 1882; the symptoms continued. In 1883 there was fistulous tracks extending to the elbow swelling of the extremity of the humerus with inflammation of the olecranon. In March, 1884, complete sub-periosteal resection, the articulation (according to Ollier's method) of the olecranon was partially destroyed as well as the trochlea and the condyle of the humerus. Rapid recovery then followed. The patient has been kept in sight during twenty months. He can use his arm for work. The limb has recovered its normal strength, though for some days it remained hanging down, for at the time of the operation M. Lagrange had not thought the muscles to be (as they were) in a state of extreme atrophy. Recourse was had to electricity, douches and massage.

At the same meeting, M. Mollière (of Lyons) said in reference to orthopædic resections, that they are indicated in congenital deformities (diformitis congenitalis), the principal of which are (1) congenital luxations of the hip; (2) club-feet. Extirpation of the astragalus, the cuneiform section of the foot, are but slight operations, though difficult to perform, sometimes proving fatal. As in the case of club-foot, it is not only the foot which is concerned,—he is of opinion that in some cases it is preferable to have recourse to osteoclasia rather than to osteotomy. In these cases he always performs sub- or intramalleolar osteoclasia of the tarsus. Osteoclasia performed with Robin's apparatus has never caused death. For *Genu vulga* and *varus* M. Mollière performs osteotomy below the condyle. In rachitic curvatures, orthopœdic resections appear best fitted for lesions of the lower limb, the tibia for instance. Osteoclasia is preferable to osteotomy—instead of removing a portion of bone it adds one. The straightening should be slow.

In ankylosis of the elbow, following traumatism, articular suppuration (blennorrhagic rheumatism, typhoid fever, scarlatina, etc.), sub-periosteal resection of the elbow is advisable, with immediate reunion without drainage. In cases of rheumatism producing ankylosis, resection of the elbow is followed by bad results; ankylosis re-appears after resection. For ankylosis of the hip, resection of the great trochanter, subtrochanterian section may restore the limb and enable it to resume its functions, but M. Mollière preferred sub-trochanterian osteoclasia. In cases of the knee, osteoclasia ought to be substituted, except where there is local tuberculous lesion. In concluding, M. Mollière said that osteoclasia can be made available in cases due to muscular deformities or burns.

M. Reclus stated at the same meeting that he had performed osteoclasia with Collin's instrument for a case of rachitic curvatures with retraction of the sural triceps. He had been obliged to perform section of the tendons of this muscle after osteoclasia, by subcutaneous method. In the case of an ill-formed callus, osteoclasia should be performed either on a level with it or at a distance.

At a recent meeting of the Paris Biological Society, M. Gréhant presented the following paper on the prevention of accidents from suffocation while descending into wells:

It is of frequent occurrence, says the author, that workmen while descending into wells or into cess-pools, or who go into cellars where the must is fermenting, suddenly fall asphyxiated from the want of oxygen, or poisoned by carbonic acid. Very recently three men perished in this way, in a well at Clamart. The first man that went down called for help, and the two others attempting to lend assistance also fell victims to their devotion. A very simple precaution, which the author pointed out several years ago, would invariably prevent such deplorable accidents.

It is only necessary to put into a cage or a basket some little animal, such as a rabbit, a guinea pig, or a bird, and lower it into the well by means of a cord, allowing it to remain there for an hour or so. If on removing the cage the animal is found to have suffered no inconvenience from its sojourn below, the atmosphere may be breathed with impunity and the workmen may go down without anxiety; but if the animal be dead, then the air in the well must be renewed and no attempt at descent be made until a fresh experiment with another animal gives a satisfactory result. As it is not an easy matter to renew the air in a well, the following directions may be found of use: A stove pipe having three or four metres more in length than the depth of the well is firmly fixed in the axis of the well by means of wires. At the level of the surface a circular grate is placed around this pipe. A second pipe of greater diameter is then slipped over the first and allowed to rest on the outer edges of the grate. A fire now being lighted and the inner pipe sharply heated, a draught ensues which draws the vitiated air from the bottom of the well. It seems necessary to heat the air in the inner pipe from the outside, as otherwise the gases from the well might put out the fire.

At a recent meeting of the Paris Biological Society, M. Quinquand read the following note: When to distilled water, containing traces of albuminoids or other similar bodies, are added a few drops of cupro-potassic liquor, a beautiful violet color is produced, called the *reaction du biuret.* This reaction is common to a great number of chemical substances, and when found in a fluid does not indicate in an absolute manner the presence of albumen or of pepton, but warrants the presumption. In attempting to produce while cold, or when only slightly heated, the same reaction in urine, there is formed in the normal state a compound precipitate of a *greenish blue* and *yellowish* color; but in urine containing albuminoids or analogous substances the tinge is of a pale *agate blue,* a *dirty blue,* a *pale sky blue* slightly violet; in a word it is a modified *reaction du biuret.* In order to appreciate this color one has only to compare the two shades produced in two test tubes, in one of which is put two cubic centimeters of normal urine with three or four drops of Fehling's liquor; in the other tube is put the same quantity of pathological urine which contains albuminoids or similar bodies. If the same quantity of cuprous liquor be now poured into the tubes, the difference in the shades of color will be very striking, and at the same time the eye will appreciate the shade of the modified *biuret*, the comparison enabling the memory to retain it. When, in operating according to the preceding method, this special color is encountered, the existence of an albuminoid should be suspected; at all events, a modification of the urinary secretion, which may indicate the probable existence of a renal affection. This reaction has already been of great service in cases of nephritis, when the presence of albumen could not be detected by the ordinary means of investigation, or with traces of albumen in slight "*peptonuries*"; in a word, in those affections of the kidneys called *latent*, or in general diseases with a disturbed urinary secretion.

The *Journal de Medicine de Paris* publishes the following note on myoctonine: Myoctonine is one of the two substances extracted from aconitum lycoctonum by Messrs. Dragendorff and Spohn. It is a yellow, bitter, amorphous body, having for its formula $C_{27}H_{30}N_2O_8$, and fusible from 143.5° to 144° centigrade. It is but little soluble in water, much more soluble in acidulated water, and soluble in all proportions in the sulphide of carbon, in absolute alcohol, in chloroform, and in benzine. Ether and the light essence of petroleum dissolve but traces of it. Myoctonine is a powerful poison, whose action resembles that of curare. The injection of $\frac{75}{1000}$ of a gramme produced distinct toxic symptoms in a cat, while $\frac{1}{10}$ of a gramme caused death in twenty or thirty minutes. Lycoctonine and lycaconine, which are products of the decomposition of lycoconitine and of myoctonine, have a physiological action which recalls that of the primitive alkaloids, but is of less power.

HEALTH IN MICHIGAN DURING JANUARY.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of January (four weeks ending January 29), 1887, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, bronchitis, tonsilitis, consumption of lungs, influenza, pneumonia, intermittent fever, diarrhœa, remittent fever, erysipelas, inflammation of kidney, inflammation of bowels, typho-malarial fever, measles, whooping-cough, diphtheria, membranous croup, scarlet fever, inflammation of brain, typhoid fever (enteric), dysentery, puerperal fever, cholera infantum, cerebro-spinal meningitis cholera morbus, small-pox.

For the month of January, 1887, compared with the preceding month the reports indicate that pneumonia increased in prevalence.

Compared with the average for the month of January in the nine years, 1879 to 1887, intermittent fever, diphtheria, consumption of lungs, scarlet fever, bronchitis, remittent fever, pneumonia, and whooping-cough were less prevalent in January, 1887.

For the month of January, 1887, compared with the average of corresponding months in the nine years, 1879 to 1887, the temperature was slightly lower, the absolute humidity was the same, the relative humidity was more, and the day and the night ozone were less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of January, 1887, at fifty-six places, scarlet fever at thirty-six places, typhoid fever at fourteen places, and measles at twenty-one places.

Reports from all sources show diphtheria reported at fifteen places less, scarlet fever at ten places less, typhoid fever at twelve places less, and measles at five places more in the month of January, 1887, than in the preceding month.

By the vital statistics in Michigan it is found that small-pox has been comparatively epidemic every five years. Thus in 1872 there were three hundred and two deaths reported in Michigan from small-pox; in 1877 there were one hundred and two; and in 1882 there were one hundred. This is the last year of one of these five-year periods, and according to past experiences we may expect small-pox this year. Small-pox is present in New York, Ohio and Wisconsin, and if immigration this year is large, the danger from small-pox may be increased. This would seem to be a good year for vaccination against small-pox.

HENRY B. BAKER, M. D., Secretary.

LANSING, February 3, 1887.

EDITORIAL PERISCOPE.

RUBELLA—GERMAN MEASLES.

For more than a century certain anomalous forms of eruptive fever, which present minged characters of measles and scarlatina, with features of an independent affection, have attracted much attention among writers. For the most part they have been considered as aberrant forms of measles or scarlatina. The discordant opinions of those who wrote upon the subject, resulted in much confusion, and gradually, all affections having a macular eruption and not recognizable as measles or scarlatina, were described by some as "rötheln," while other writers, even, were induced to fall back upon the old teaching of the identity of measles and scarlatina. And when Hebra entirely discredited its specific existence the identity of rötheln seemed quite disproven, but within the last twenty years the question has assumed a phase that gives hopes of its satisfactory solution.

A large number of communications have lately appeared in the journals, adding materially to the sum of our knowledge of the disease. The latest writer on the subject, Dr. I. E. Atkinson, in the January number of *The American Journal of the Medical Sciences*, defines it as a specific, exanthematic, contagious disorder, characterized by a period of incubation lasting usually from two to three weeks; a prodromal period varying from a scarcely appreciable interval to one day, less commonly two, and rarely several days; and an eruptive period in which there is an exanthem closely resembling that of measles. A period of desquamation is in most cases wanting, and when present is but feebly developed. During the attack and frequently preceding the eruption, there occurs almost constantly an enlargement of the cervical, submaxillary, auricular, suboccipital, and sometimes of other glands, which is often painful but never suppurative. Catarrhal symptoms are absent or but slightly marked. A faucial hyperæmia is almost constant, but is rarely accompanied by pain. Throughout the attack fever is absent in about half of the cases, and when present rarely endures to the end of the second day or exceeds 39° centigrade (102° Fahrenheit). The attack seldom lasts longer than three or four days, and the patient rarely keeps to his bed. The affection may prevail sporadically or epidemically, and is contagious, though to a less degree than measles. One attack usually confers immunity from subsequent ones, but does not protect from measles or scarlatina, nor do these exanthems confer immunity from rötheln. His conclusions are:

While it posseses pretty well defined characteristics, which, taken together, justify a reasonable degree of certainty in its diagnosis, it has no symptom that may not be and is not often assumed by measles.

A sporadic case, occurring in one who has never had measles and who affords no history of exposure to rötheln, may be diagnosticated with a fair degree of confidence, but not with absolute certainty.

The unqualified diagnosis of rötheln should only be made during an epidemic in which persons exposed, irrespective of former attacks of measles, are liable to be affected, and in whom the symptoms follow a pretty uniform type. In the absence of a pronounced epidemic influence, a series of cases occurring in a household, a school, or an asylum, showing typical symptoms, may be diagnosticated as rötheln with a fair degree of confidence.

In sporadic cases, where neither measles nor rötheln has been experienced, a diagnosis of probable measles or rötheln must be made, as conditional by the resemblance of the symptoms and course to the type of one or the other affection.

THE VALUE OF QUININE AS AN ANTIPYRETIC IN PNEUMONIA.

A paper on this subject was read by Dr. John H. Ripley before the New York Academy of Medicine January 20, 1887. It contained deductions drawn from the records of forty-eight cases treated in the Saint Francis Hospital. Quinine was given only in cases in which the temperature had reached at least 103° Fahrenheit. The drug was given most frequently by the mouth, in solution, occasionally hypodermatically and sometimes by the rectum. No observation lasted less than four hours, and usually not less than six to twelve hours. In the earlier cases the temperature was taken every fifteen minutes, in others every half hour, or hourly, and always by the rectum. The following tests were made: twenty, with a single dose of twenty grains, and five with thirty grains, of the sulphate in solution by the mouth; three, with thirty grains, and two with thirty-five grains, given in five grain doses every two hours; eight, with forty grains, given in a single dose by the mouth; three, twenty grains, three, fifteen grains, and one, eight grains, hypodermatically. The reduction of temperature which took place was in every instance of short duration. There was no uniform time as to when the temperature began to fall, nor as to the duration of the fall; in a large number of cases there was a slight lowering of the temperature within fifteen minutes; in others it began to fall within half an hour to three hours. The time from the beginning of the fall to the permanent rise was from two to ten hours. But the temperature, even when taken every fifteen minutes, was found to vary constantly. The effect on the pulse and respiration was not constant nor uniform; nor were the pulse and respiration found to be a guide as to the effect upon the temperature. In six cases, when the temperature was reduced more than two degrees, there was malarial poisoning in four; in other cases, except in a single instance, the greatest reduction of heat was only one degree and a fraction. Judging from these experiments, the most that could be expected from the daily administration of from twenty to forty grains of quinine, in the active stage of lobar pneumonia was a reduction of the temperature between one and two degrees Fahrenheit in about half the cases, and less than one degree in the other half. When it is considered that the lowest point reached did not continue approximately more than two hours, the effect of the drug is still less important.

Besides being only a very feeble antipyretic there were other objections to its use in large doses. Anorexia and nausea were produced by even moderate doses, while larger doses excited retching and vomiting; prolonged intolerance of food and stimulation; marked cardiac weakness lasting for hours, sometimes associated with dicrotic pulse; profuse and often cold perspiration, profound nervous depression, somnolence, delirium, muscular twitching and trembling, dilated pupils, and in two instances opisthotonos were among the effects upon the nervous system. In his opinion the injurious effects of quinine in large doses more than counterbalance any good that might be in its slight temporary reduction of temperature.

CONDENSATIONS.

Sent Free.—A paper bound copy of "An Epitome of the Newer Materia Medica" will be mailed without charge by Messrs. Parke, Davis & Company to any of our readers applying for the same.

Cocaine Addiction.—If any of our readers have met with a case of cocaine habit, by kindly sending the details to Dr. Mattison, of 314 State street, Brooklyn, New York, he will reimburse him for any expense incurred and give him credit in a coming paper.

Sterility From Tea-Drinking.—Dr. Davies claims that tea-drinking undoubtedly acts in the direction of producing sterility in females. Attention is called by him to the fact that the Druidic College of the twelfth century considered tannin the most potent of all the products of nature in producing this condition.

Tait's Hospital.—Mr. Lawson Tait never permits anything in the nature of organic matter to remain about his hospital, and never examines a patient there until she has taken a bath, changed her underclothes and gone to bed. He is scrupulously clean in everything he does; hence he can well afford to express contempt for "germs and beasts."

Professional Secrecy.—This question has recently come up in the administration of the Pension Bureau at Washington. Dr. Garnett recently gave a certificate of disability to an employé of this department. The head of the department requested of Dr. Garnett a specific statement as to the ailment of the patient, which was refused. An appeal was then taken to Secretary Lamar who sustained the position taken by Dr. Garnett.

Floating Liver.—At a late meeting of the Philadelphia Pathological Society, Dr. Formad exhibited a floating liver removed postmortem. The patient was a German woman who had borne many children, and had for years a pendulous abdomen, with great relaxation of the skin and separation of the recti muscles. The ligaments were much relaxed, particularly the suspensory, which was greatly elongated. The organ was not enlarged and appeared healthy.

Senses of Cold and Touch.—Professor Herzen has recently shown by vivisections that the physiological senses of cold and touch are distinct. Generally an injury to the cortex of the brain that destroys the sense of touch in any region will also abolish the sense of cold. He accidentally discovered, by cutting less deep than he intended, the sense of cold was destroyed, but that of touch was not impaired, thus proving that the brain centres for these two senses are distinct.

Harvard's Unique Legacy.—The Harvard Medical School has received the mortal remains of Isaac W. Sprague, who "musee-ed" as a "living skeleton." Until twelve years of age he developed naturally, then he began to emaciate, and for years the atrophy of the muscles has been so great as to prevent locomotion. He frequently arranged with Dr. Holmes, when he was professor of anatomy, to exhibit himself in the amphitheatre. Sprague weighed forty pounds at the time of his death. Many physicians had examined him with a view to diagnosis, but without expressing any positive opinion. An autopsy may now explain the cause of his mal-nutrition.

LYMPHATIC GLAND OF THE HEART.—The existence of a lymphatic gland of the heart has been demonstrated by Dr. E. Baisrlrocchi. The gland is situated between the aorta and pulmonary artery. He has found the gland to be constant in many of the lower animals, and has found it in the human subject.

FOR SECURING ABSOLUTE CLEANLINESS.—Belaseff suggests an ingenious method of insuring absolute cleanliness of the hands before performing obstetrical operations. It consists in rendering visible all the crevices and cavities in which septic matter may be carried. The blue pigment, aqua marina, is thoroughly rubbed up with vaseline, and the hands of the surgeon are carefully rubbed with the mixture, filling all the grooves and fissures under and around the nails and joints. The hands are now washed and when all the pigment is removed it may be assumed that every trace of morbid or infectious matter is removed.

GASTROTOMY TO REMOVE A TABLE KNIFE.—The report of a case of gastrotomy made for the removal of a table knife is made to the *Saint Louis Medical and Surgical Journal* by Dr. Bernays, of that city. The patient is an expert in the so-called sword swallowing trick, and for the entertainment of his family pushed a table knife more than nine and one-fourth inches down his gullet, the handle foremost. He removed his fingers from the blade, and the knife passed down into his stomach. Less than an hour after the knife had been swallowed, Dr. Bernays, assisted by Drs. Barch, Hanch and Kinner, cut through the abdominal wall, opened the stomach and extracted the knife. He ate his usual fare after the tenth day, and was discharged from treatment on the fourteenth day.

ABANDON INTRA-UTERINE MEDICATION.—In a paper by Dr. Emmet, of New York, read in the section of obstetric medicine at the annual meeting of the British Medical Association, in Brighton, he argues strongly, and to the unprejudiced, convincingly, for the abandonment of intra-uterine medication and instrumentation. He stated that for years he has taught that the key to the diseases of women is found *outside* of the uterus, and that this organ is not prone to take on disease, *except in* connection with new growths or as a result of injury during childbirth. During the past seven years he has not made, in ordinary practice, an application of iodine within the uterine canal. He has not owned a sound for years, and his uterine probe has been broken for eighteen months, both instruments having become useless to him since he acquired any knowledge of bi-manual palpation.

FOREBODINGS IN DISEASE.—Dr. Richardson states that there are two kinds of forebodings—the fanciful and the serious. False forebodings are presented by the person's fanciful and flighty nature, who are really fond of contemplating risks, and who suggest anxiety one moment and laugh at them a few moments afterwards. These forebodings have no serious importance. True or serious forebodings emanate from persons who are firm and thoughtful, who as a rule keep to themselves what is in their minds until something like a crisis has been reached, when they come to a conclusion to which they adhere by which they are much influenced. These forebodings are a critical disease, and are bad: they have a direct influence on the physical powers, the heart's action is impaired, and there is a want of tone, very much opposed to the restorative efforts. A nice plan is to take as little notice of these forebodings as possible, but to ridicule them is bad.

THERAPEUTIC USES OF THE HOT BATH.—The application of heat to the surface of the body in the form of hot-air vapor and the hot-water baths, has long been used as a therapeutic agent, but the good and the bad results obtained from it are not properly appreciated or understood. As a rule the effects of these baths are ascribed almost entirely to their action on the skin. From the want of knowledge of their more remote influence, the hot-water bath is usually regarded with dread. In some cases this is no doubt wisely maintained: subjects of serious cardiac disease, or circulatory derangements, should not take a very hot bath or continue long in it. With hot baths, as in most other remedies, the time and manner of application are of importance. The hot bath should be taken before the principal meal of the day; its duration should not be more than fifteen minutes, and the temperature should not be above 105°

Fahrenheit. If faintness should come on while in the bath, the whole head should be immersed in the hot water, and kept there for a few seconds, when the faintness will disappear. It has been clearly proven that the application of heat to the head is a potent means of averting syncope. One of the most marked effects of the hot bath is the increased force of the circulation, and necessarily a corresponding increase of muscular and mental energy, and if these results are not attained the baths are deleterious and not beneficial.

RELIC OF JOHN HUNTER.—From the London letter in the *Journal of the American Medical Association* we learn, that an interesting relic of that great anatomist and surgeon, has just been presented to the Royal College of Surgeons. It consists of a chair formed out of the materials composing the bedstead on which John Hunter slept nightly for many years, and on which his remains were laid previous to removal for burial. The idea of converting the unwieldy frame of an "old-fashioned four-poster" into a handsome and imposing looking chair was due to the late Mr. Buckland, to whom the bed had been given as a birthday present by Professor Owen. Another interesting point in connection with this is that it was owing to the personal exertions of Mr. Buckland that the remains of John Hunter were removed from the vaults of Saint Martin's-in-the-Field and deposited in the honored resting place in Westminster Abbey.

ANNALS OF SURGERY.—The rapid advancement that is being made in the principles and practice of surgery is best comprehended when the amount of literature that is constantly produced on these subjects is considered. The proportionate space allotted to surgery in all our medical journals is noticeably on the increase, yet it is inadequate, and journals specially devoted to the subject are found necessary to present the vast amount of valuable matter furnished. The comprehensive international monthly entitled *Annals of Surgery* supplies this demand in the English language. Each number of this publication contains from eighty to one hundred pages, devoted exclusively to surgical matter. In respect to its paper, type, and make-up, it is a master-piece of typographical art. Its contents includes: "Original Memoirs" from the ablest thinkers and writers; "Editorial Articles" in form of elaborate discussions and comprehensive digests; "Index of Surgical Progress," being an analytical summary of surgical contributions from every source, and the important work of the surgical societies of all progressive countries; "Reviews of Books," and "Minor Contributions," consisting of reports of cases, hospital reports, etc. The editors, Dr. L. S. Pilcher, of Brooklyn, and Mr. C. B. Keetley, F. R. C. S., of London, and the publishers, Messrs, J. H. Chambers & Company of Saint Louis, are conjointly carrying an enterprise that means an invaluable record of contemporary surgery, and are justly entitled to the support of every friend of scientific surgery.

THE WEIGHT OF THE TISSUES OF THE HUMAN BODY.—Professor Huxley states that the proper weight of man is one hundred and fifty-four pounds, made up as follows: Muscles and their appurtenances, sixty-eight pounds; skeleton, twenty-four pounds; skin, ten and one-half pounds; brain, three pounds; thoracic viscera, three and a half pounds; blood, which would drain from the body, seven pounds. The heart of such a man would beat seventy-five times in a minute, and he should breathe fifteen times a minute. In twenty-four hours he would vitiate 1,750 cubic feet of air to the extent of one per cent. A man of this weight should have eight hundred feet of well ventilated space. He would throw off by the skin eighteen ounces of water, three hundred grains of solid matter, four hundred grains of carbonic acid, every twenty-four hours; and his total loss during that time would be six pounds of water, and a little more than two pounds of other matter.

STIMULANTS AS RETARDING DIGESTION.—Sir William Roberts has lately suggested an ingenious hypothesis, to explain the beneficial effect derived from stimulants, which offers a plausible explanation of their use. Man in a state of nature would derive his sustenance presumably from materials which, from their being raw, or at any rate imperfectly cooked, would be necessarily but slowly digested and assimilated. With civilized communities, on the contrary, everything is done with a view of facilitating digestion, by the removal of indigestible parts, which assists the action of the juices with which they are to be brought into contact. Under these circumstances it is quite possible that digestion and assimilation may proceed at a speed not only unnecessary, but even disturbing to the equilibrium of the organism, and provocative of waste. The employment of alcohol, tea, coffee, etc., would tend to correct this undesirable acceleration of the assimilative processes, for Sir W. Roberts has proven by a series of carefully conducted experiments that their effect is powerful to retard the action of the various digestive ferments on the foods; and it may be that the instinctive sense of the benefit thereby derived lies at the root of the yearning of all civilized nations for such substances. Again, some condiments, such as common salt, is added to restore sapidity to articles from which the salts have been removed in the process of cooking; and, taken in excess, it only throws extra work on the organs of excretion.

LOCAL ANÆSTHESIA OF THE GUMS.—If the statements made by Professor Viaer, of Paris, to the Odontological Society, of Paris, be true, then the terrors of the dental chair are at last banished: The anæsthetic consists of a solution of hydrochlorate of cocaine, made with a two per cent. aqueous solution of carbolic acid. The solution is prepared fresh, by dissolving three-fourths of a grain of the cocaine in eight minims of the carbolic solution. One-half is injected by means of the hypodermic syringe into the gum on each side of the tooth. The finger is quickly placed over the puncture of the first injection to prevent any escape while the second is being made. After the injections are made the patient is directed to rinse the mouth with cold water. In three minutes the gum is profoundly anæsthetized, and in five the osseous portions are insensible to pain, and the tooth may be drawn without sensation of pain.

NEW PUBLICATIONS.

PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. By Fessenden N. Otis, M. D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York; Surgeon to Charity Hospital; Consulting Surgeon to Saint Elizabeth's Hospital, to the New York Skin and Cancer Hospital, and to the Colored Orphan Asylum; Fellow to the New York Academy of Medicine; Member of the British Medical Association, etc. 8mo: five hundred and eighty-four pages. New York: Published for the Author, 1886.

The author has titled this the "Student's Edition," and has caused it to be published because the former edition is exhausted. Dr. Otis' work has become an established text-book in medical colleges, although it contains views that produced considerable discussion when they were first advanced but a few years ago.

His theory for the explanation of the various syphilitic phenomena is now generally received and adopted by those who study and treat this disease. Other studies that are equally in advance and somewhat at variance with what was then taught by lecture and text-book, are now approved by eminent teachers and authorities upon the subject.

To illustrate his views and to emphasize important points, use is made of clinical cases typical of the point in question.

On the subject of "Treatment of the initial lesion of syphilis," the author teaches the early removal of the local lesion by excision ; not with the expectation of preventing constitutional infection (which he believes is inevitable), but as far as possible to remove a focus of dissemination for diseased elements, and to diminish the danger of conveying disease to others. "In no case does this procedure lessen the necessity for *constitutional treatment.*"

In the chapter on the treatment of syphilis in the acute stage, the author shows that measures are not to be addressed to a vague and conventional diathesis, but to the removal of the material which creates the disturbance ; "That is to the superfluous cell growth or accumulation. The same material that we find in the initial lesion, and the same as that which we find embarrassing and enlarging the gland structure. The same as in the papule. The same as in the mucous patch. The same as in the papules which form the scabs which occur in the hair. These lesions are all brought about and kept up by one and a single condition—that resulting from an abnormal local proliferation and accumulation of germinal cells." These cells, the author claims, differ in no known respect from normal germinal cells, except that they are the product of a proliferation more rapid than that process under normal conditions ; and that the only process capable of removing this superfluous cell material is a *fatty metamorphosis.* The means by which it can be effected are : One, pressure ; two, innutrition ; three, various external and internal remedies. The first and second are quickly dismissed ; under the third various substances are mentioned. "But the remedy," says the author, "of greatest acknowledged value in the treatment and cure of syphilis, for the past two hundred years and up to the present day, is *mercury*, and this, it is well known, is also the most efficient agent in producing fatty metamorphosis of living material. * * Hence we can accept from an intelligent and philosophical stand-point the position which has heretofore been only taken from a clinical or empirical view of the matter, namely, *That small doses of mercury, long continued, constitute the most effective and judicious mode of treatment of syphilis during the active stage.*"

In his consideration of late or chronic mucous patches, Dr. Otis regards all lesions of late syphilis of the same significance as to their contagious property. After citing cases to illustrate the possible persistence of contagious lesions he says: "It will at once be seen that as such lesions of the mouth may appear several years after the apparent cure of syphilis, no real guarantee against the danger of communicating syphilis for a long period of years can ever be given, and if such guarantee cannot be given, *no man, it appears to me, has ever a right to advise or even to consent to marriage of a person who has once had syphilis.*"

More than half of the work is devoted to the consideration of Gonorrhœa and its Sequelæ. He does not believe that true gonorrhœa can be aborted, and states as his positive conviction and belief, based on a long and careful experience, "*That any urethral discharge which gets well within four weeks under any sort of treatment, never was a true gonorrhœa.*" He also believes that it is a self-limited disease in its acute form, and "when it lasts longer than four weeks, or when apparent recovery takes place and the discharge breaks out afresh without new exposure, that there is a complication present, either the result of the current inflammatory trouble, or of some inflammation antecedent to the attack; which causes the continuance of the trouble, and which must be appreciated and removed before any *permanent* cure can be had. This complication is *urethral stricture.*"

The author's style is clear, and logical; his deductions are stated with a positiveness that creates interest in the reader and inspires in him a confidence in the present state of knowledge on these subjects. Every student and physician will be profited by reading these practical clinical lessons on syphilis and the genito-urinary diseases.

HOW WE TREAT WOUNDS TO-DAY. A Treatise on the Subject of Antiseptic Surgery which can be understood by beginners. By Robert T. Morris, M. D., Late House Surgeon to Bellevue Hospital, New York; Member Linnæan Society of Natural History, New York; Member New York County Medical Society. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1886.

The author of this little work writes with a positiveness that is seldom met in medical literature. The rightness of perfect antiseptic wound dressing, and the wrongness of imperfect antiseptic measures in surgery, are convictions that have struck deep into his surgical conscience. He sees surgery full of pus and corruption. He is convinced that he is on the right side, and enters with enthusiasm into the work of enlisting others into the cause of perfect antiseptic wound dressing. He shows what is meant by antiseptic science, by describing concretely how certain wounds should be treated. No arguments are advanced, but concise statements are made.

THE STUDENT'S MANUAL OF VENEREAL DISEASES. Being a Concise Description of those Affections and of their Treatment. By Berkeley Hill, M. D., Professor of Clinical Surgery in the University College, London; Surgeon to University College and the Lock Hospitals: and Arthur Cooper, M. D.. Surgeon to the Westminster General Dispensary; Formerly House-Surgeon to the Lock Hospital. Fourth edition, revised. 12mo: one hundred and thirty-two pages. Cloth, $1.00. Philadelphia: P. Blakiston, Son & Company, 1886.

Conciseness and clearness have been attained by the authors in this little work. The main elementary facts relating to venereal diseases and their treatment are given without any circumlocution. It contains many valuable formulæ, which are conveniently classified. It is an excellent little work, and we heartily commend it to the student, for whose benefit it was prepared.

BOOKS AND PAMPHLETS RECEIVED.

"Abstract of Proceedings of the Michigan State Board of Health." Regular meeting January 11, 1887.

"Thirteenth Annual Report of the Superintendent of the Cincinnati Sanitarium, for the Year Ending November 30, 1886."

"The President's Address." Tenth Annual Meeting of the Detroit Medical and Library Association. By C. J. Lundy, A. M., M. D.

"Inter-State Notification: Its Principles as Demonstrated in the History of Yellow Fever at Biloxi, Harrison County, Mississippi, 1886."

"Uterine Cancer." By J. Henry Carstens, M. D., Professor of Obstetrics and Clinical Gynæcology, in the Detroit College of Medicine.

"Common Errors: Theoretical and Practical, Relating to Insanity." By Orpheus Evarts, M. D., Medical Superintendent of the Cincinnati Sanitarium; Late Superintendent of the Indiana Hospital for the Insane; Late President of the Association of Medical Superintendents of American Institutions for the Insane, etc., etc. From the *American Journal of Insanity* for October, 1886. Revised by the Author.

"Sterility." Read to the Louisville Medical Society, December 23, 1886. Reprinted from *South-Western Medical Gazette,* January, 1886.

"Report of the Board of Trustees of the Eastern Michigan Asylum at Pontiac, for the Biennial Period Ending September 30, 1886." By Authority. Lansing: Thoop & Godfrey, State Printers and Binders, 1886.

"Certain Hereditary and Phychical Phenomena in Inebriety." By T. D. Crothers, M. D., Superintendent of Walnut Lodge, Hartford, Connecticut. Reprinted from the *Alienist and Neurologist,* Saint Louis, October, 1886.

"The Relative Influence of Maternal and Wet Nursing on Mother and Child." By Joseph Edeil Winters, M. D., New York. Reprinted from the *Medical Record,* November 6, 1886. New York: Trow's Printing and Bookbinding Company, 1886.

"An Epitome of the Newer Materia Medica, Standard Medicinal Products, and the Pharmaceutical Specialities," introduced and manufactured by Parke, Davis & Company, with Complete Property and Dose List. Fourth edition, revised and enlarged. Parke, Davis & Company, 1886.

"Transactions of the American Dermatological Association, at the Tenth Annual Meeting held at Indian Harbor Hotel, Greenwich, Connecticut, on the 25th, 26th, and 27th of August, 1886." Official report of the Proceedings of the Society. G. H. Tilden, A. B., M. D. Boston, 1886.

"Rhinology in the Past and of the Future." An Address Delivered before the American Rhinological Association on October 5, 1886, at Saint Louis, Missouri. By Carl H. Von Klein, A. M., M. D. Reprinted from the *Journal of the American Medical Association,* December 18, 1886.

"In Shipping all Industries Unite." Conference of the American Shipping and Industrial League, held at Pensacola, Florida, November 10 to 12, 1886. Address on Relation of Quarantine to Shipping Interests by Joseph Holt, M. D., President, Board of Health, State of Louisiana.

"Source of the Mississippi," comprising (1) Letter from Messrs. Ivison, Blakeman, Taylor & Company; (2) Report of Hopewell Clark, Chief of the Ivison, Blakeman, Taylor and Company Expedition to the Headwaters of the Mississippi, October, 1886. Reprinted from the *Science,* December 24, 1886.

"Diseases of the Blood and Nutrition, and Infectious Diseases;" being Volume IV of 'A Handbook of Practical Medicine,' by Dr. Hermann Eichhorst, and Volume XII of Wood's Library for 1886 (completing the set, price of set, $15.00). Illustrated. New York: William Wood & Company.

"On Certain Mooted Points in Gynæcology." Read in the Section of Obstetric Medicine of the Annual Meeting of the British Medical Association in Brighton. By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of New York. Reprinted for the author from the *British Medical Journal,* November 13, 1886. London: The British Medical Association, 1886.

"A Novel Procedure for the Removal of the Subglottic Laryngeal Growths with the report of an illustrative case." By William Chapman Jarvis, M. D., Clinical Professor of Laryngology and Diseases of the Nose and Throat in the New York University Medical College, and Laryngologist to the Out-Door Department of Bellevue Hospital. Reprinted from the *New York Medical Journal* for November 27, 1886. New York: D. Appleton & Company, 1886.

"Ueber Wirkung, Therapeutischen Werth und Gebrauch des neuen Karlsbader Quellsalzes, nebst dessen Beziehung zum Karlsbader Thermalwasser." Von Dr. W. Jaworski, Universitäts-Dozenten in Krakau (im Sommer in Karlsbad). Klinisch-Experementelle Untersuchungen aus der Mediz. Universitätsklinik des Professor Korczynski in Krakau Separatabdruck aus Dr. Wittelshofer's *Wiener Mediz. Wochenschrift,* Number 6, 7, 8, 9, 10, 11, 12, 14 und 16, 1886. Wien, 1886. Selbetverlag des Verfassers.

"Management of the Sucundines." Read to the Section on Obstetrics of the American Medical Association at Saint Louis, May 4, 1886. Reprinted from the *Journal of the American Medical Association,* June 19, 1886. Papers by William H. Wathew, M. D., Professor of Obstetrics and Diseases of Women and Children in the Kentucky School of Medicine; President of the Kentucky State Medical Society; Gynæcologist to the Louisville City Hospital; Honorary Member of the Alabama Surgical and Gynæcological Association, etc.

"Diseases of the Lungs and Pleuræ, including Consumption." By R. Douglas Powell, M. D., London, Fellow of the Royal College of Physicians; Physician to the Middlesex Hospital and to the Hospital for Consumption and Diseases of the Chest, at Brompton; Late Assistant Physician and Lecturer on

Materia Medica at the Charing Cross Hospital. Third edition, rewritten and enlarged, with illustrations, including two lithographic plates; being Volume XI of Wood's Library for 1886 (twelve volumes in set, price $15.00). New York: William Wood & Company.

"Report on Diseases of the Rectum." By Joseph M. Mathews, M. D., Professor of the Principles and Practice of Surgery and Diseases of the Rectum in the Kentucky School of Medicine, Louisville; Visiting Surgeon to Louisville City Hospital; Visiting Surgeon to Saints Mary and Elizabeth Hospital; Member of the American Medical Association, Kentucky State Medical Society, etc. Read before the Kentucky State Medical Society, at Winchester, June 24, 1886. Louisville: Printed by the Bradley & Gilbert Company, 1886.

"Manual of Operative Surgery." By Joseph D. Bryant, M. D., Professor of Anatomy and Clinical Surgery and Associate Professor of Orthopedic Surgery, Bellevue Hospital Medical College; Visiting Surgeon to Bellevue Hospital; Consulting Surgeon to the Bureau of Medical and Surgical Relief of Bellevue Hospital; Consulting Surgeon to the New York Lunatic Asylum, and to the Northwestern Dispensary. With about eight hundred illustrations. 8mo: five hundred and thirty pages. Cloth. New York: D. Appleton & Company, 1887.

MEDICAL DIGEST.

A NEW PRINCIPLE IN THE TREATMENT OF PARASITIC SKIN DISEASE.

Dr. Alfred W. Perry, of San Francisco, California, writes: The disappointments and delays with which I have met in treating and curing even small areas of tinea circinata, sycosis, and tinea tonsurans have led me to investigate the cause, and I believe I have discovered not a new remedy, but the true principle of the application of old remedies. The parasiticides are all active enough to kill the parasite when brought in contact. The cause of failure is in the vehicle used. The various remedies are used in alcoholic, watery, benzine, benzol, or oleic-acid solutions, or else mixed in fine powder in ointments. The parasite exists deep in the skin, in the hair or other follicles, or between the epithelial scales. The skin is so charged with the natural fatty sebaceous secretion that it repels watery and alcoholic solutions; these cannot penetrate a follicle filled with fat. The oleic-acid solutions and ointments are not repelled, but they only penetrate the skin after much rubbing and kneading, with simultaneous epilation. A vehicle must be used which will dissolve the sebaceous matter of the skin, and also the remedy. Ether dissolves bichloride of mercury and iodine. Iodine is soluble in turpentine and benzine. I prefer the bichloride of mercury in ether, two grains to one ounce. Iodine oxidizes quickly in turpentine and slowly in benzine, while the bichloride always remains active.

Any of these solutions holding a parasiticide in solution, when applied to the skin, will wet or adhere to the skin perfectly, will penetrate between the epidermic epithelial scales, and into the hair and sebaceous follicles, carrying the parasiticide and dissolving the fatty secretion.

Theory has led me to this line of treatment, of which practice has shown me the great benefit. To apply the bichloride solution in ether, use a small brush over the affected surface, two or three consecutive days, then wait for the slight irritation to subside, applying any bland ointment. There are many remedies which dissolve in the fat solvents—naphthaline, thymol, carbolic acid, chloral, salicylic acid—and these may be suited to individual cases or circumstances.—*New York Medical Record.*

POSOLOGY AND USE OF SOME NEW REMEDIES.

Osmic acid: Best administered in pill form (made up with Armenian bole). The dose is one-sixtieth of a grain, which may be repeated several times a day. Used in epilepsy and sciatica. Agaricine: Best administered in combination with Dover's powder. Dose, one-twelfth to one-sixth of a grain. Used for night sweats. Aloin: From one-third of a grain to three and a half grains in pill form. Antipyrin: Dose from seventy-five to ninety grains, divided into three portions, one of which is to be taken every hour. Bismuth salicylate: Dose from five to seven grains, in pill form. In typhoid this dose may be doubled and repeated every hour up to ten or twelve times. Canabinone: From two-thirds to one and a half grains. Best administered mixed with finely-ground roasted coffee. Sedative and hypnotic. Colocynthin: Used subcutaneously. The dose is from one-sixth to one-half of a grain. It may also be administered in pill form, by the mouth, the requisite dose being from one-third to one grain. Convallamarin: Internally, in pill form. The dose is from three-fourths to one and a quarter grain. Euonymin:

Best given in pill form, combined with extract of belladonna or hyoscyamus. The dose is from three to ten grains. Nitroglycerin is best given in alcoholic solution. The dose is from one one hundred and fiftieth to one-sixtieth of a grain, repeated several times a day. Rossbach prefers ether as a solvent. His formula for its use is as follows: Dissolve one and a half grains of nitroglycerin in sufficient ether, and add the solution to a mixture consisting of two ounces of powdered chocolate and one ounce of powdered gum-arabic. Mix very thoroughly and divide into two hundred pastilles. Each pastille will thus contain one three hundred and thirty-third of a grain of nitroglycerin. Used in angina pectoris, and as a diuretic. Picrotoxin: In aqueous solution. Dose from one-eighth to one-sixth of a grain. Used in epilepsy. Sulphate of thalline may be given dissolved in wine or water (with some corrigerant). The dose is from four to eight grains, or one grain every hour.

THERAPEUTIC PROGRESS.

A Cure for Warts.—Take fifteen grains of corrosive sublimate and dissolve in one ounce of collodion. Brush the warts carefully once a day with this solution. This remedy is more efficacious and more convenient than other recommended procedures.

An Intestinal Antiseptic.—Bouchard uses the following:

℞. Naphthalini,
Pulverized sugar, āā .... ʒiss.
Oil bergamot.. gtt. iij.
Ft. pil. xxx. Sig. One every hour.

Iodole in Ear Diseases.—Dr. Stretter substitutes iodol for iodoform, in a large number of cases of ear disease, and finds that in acute purulent inflammatory affections iodol applications rapidly produce marked benefit, but that in chronic inflammation of the middle ear it is generally quite useless.

Santonine.—This drug is generally considered to act as a poison upon ascarides, but Dr. Schroeder states that santonine does not kill these worms, but its presence being distasteful to them causes them to leave their resting place and wander into the large intestine from which they can then be removed by a purgative.

ANGINA PECTORIS.—Iodide of sodium is highly recommended by Hichoed in the treatment of angina pectoris. Laschkevitch speaks highly of the effects of cocaine in doses of from one-half to one-third grains three times a day.

THAPSIA PLASTER.—Dr. Crook considers this to be one of the most vigorous of counter-irritants. There are, however, two objections to its use. These are the remarkable tendency of the eruption to spread and the occasional severe and painful character of its local action.

NITRO-GLYCERINE IN TREATMENT OF FATTY HEART.—Professor Bartholow speaks very favorably of the use of nitro-glycerine persistently in the treatment of fatty heart. It takes the strain off the weakened organ and allows it to gain strength while its work is lessened.

ERGOT IN EXCESSIVE FLOW OF MILK.—Dr. Eretzky states that ergot checks excessive flow of milk, and is capable of suppressing it entirely. It is of benefit when the mammary gland becomes swollen and inflamed in consequence of weaning the child or from other cause.

BISMUTH FOR SWEATING FEET.—M. Vieusse states that excessive sweating of the feet, under whatever form it appears, can be quickly cured by carefully conducted friction with subnitrate of bismuth, and even in the few cases where this suppresses the abundant sweating only temporarily, it still removes the fetidity which often accompanies the secretion.

HYPODERMIC ADMINISTRATION OF STRYCHNIA.—Dr. Austic says the full effects of this drug are rapidly developed when administered hypodermically. He proposes a solution of the sulphate, two grains to the ounce of distilled water, of which the proper commencing dose is two minims (1-120). If the dose exceed one-sixtieth grain unpleasant toxic effects follow.

BISMUTH FOR ECZEMA IN CHILDREN.—Widerhofer treats eczema in children successfully with a five per cent. lanolin and bismuth salve. This is thickly spread upon linen, and bandaged upon the part morning and night. Lanolin forms but a small amount of fatty acids upon the skin, while vaseline and other fats readily produce fatty acids, which to the child's sensitive skin are very irritating.

CHRONIC BRONCHITIS.—In a case of chronic bronchitis, Dr. Rex, of Jefferson Medical College Hospital, prescribed the following:

℞.	Chloride of ammonia	grs. x.
	Wine of ipecac	gtt. v.
	Tincture hyoscyamus	gtt. x.
	Syrup senegæ	♏ xlv.
	Compound licorice mixture, q. s., ad	f℥ij.

M. Sig. To be taken at first every two hours, but afterward reduced to three times daily.

IMPROVED COMPOUND LIQUORICE POWDER.—Dr. Oxley wishing to correct the unpleasant griping effect of the officinal preparation, substituted anise seed for fennel and added ginger. His formula is the following:

℞.	Pulverized senna, Pulverized liquorice root, āā	2 parts.
	Pulverized anise seed, Pulverized sulphur, āā	1 part.
	Sugar	5¾ parts.
	Pulverized ginger	1 part.

PERMANGANATE OF POTASH AS AN EMMENAGOGUE.—Dr. Benjamin Marshall writes to the *Therapeutic Gazette*: In your June issue is an article on the use of the permanganate of potassa, as an emenagogue, and asking for results. My conclusions, after using it in about fifty cases, are as follows:

(1) It acts with certainty in about seventy per cent. in selected cases.

(2) It may be given at any time, but preferably one or two hours after eating, as it is not so apt to sicken the stomach. I do not think it is any more efficient when given on an empty stomach.

(3) I have used the sulphate in a number of cases with less certain effect; the results attained may, however, have been accidental.

(4) In most cases it produces an exhilaration of spirits.

(5) It has a decided tonic effect.

(6) It will become an indispensable therapeutic agent.

(7) Its disagreeable effect on the stomach is best relieved by a combination of

℞.	Cerii oxalas	gr. 1.
	Cocaine hydrochlorate	gr. 1/6.
	Subnitrate of bismuth	gr. v.
	Pulverized ipecac	gr. 1/60.

Mix. Ft. cachets; one every hour.

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ORIGINAL ARTICLES.

ON THE MODE OF ELIMINATION OF MERCURY FROM THE SYSTEM AND THE TIME REQUIRED FOR ITS ACCOMPLISHMENT.

BY F. N. OTIS, M. D.,
Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York City.

One of the most common and important objections urged against the use of mercury in the treatment of syphilis is that it is very slowly and imperfectly eliminated from an organism more or less saturated with it and that an important amount remains in the tissues for an indefinite time. This is popularly accepted as being capable of producing various troubles from its mechanical influence and ready to enter into painful or even destructive combination with any conditions, disease or dyscrasia, which may come into unfavorable relations with it at any time during the remainder of the life of the patient. It is in this way most often claimed to affect chiefly the bony structures like the late lesions of syphilis and even believed by some to be the sole cause of many of the destructive lesions which are characteristic of the sequelæ of syphilis. These claims have been difficult to combat from the fact that but little information has found its way into the text-books in regard to the mode and rate of elimination of the drug. From the experiments of Mayençon and Bergeret on animals (*Robin's Journal de l'anatomie*, quoted by H. C. Wood—"Therapeutics," etc., fourth edition, Philadelphia, 1882) it is concluded that "the chief channel of escape seems to be the kidneys; but it is very certain that, at least in a certain number of cases, the drug is freely excreted by the salivary glands as well as by the intestines" (page 397). Ringer, of London, in his "Hand-book of Therapeutics" (page 243) says: "Mercury salts are to some extent eliminated by the urine, but chiefly by the mucous membrane of the intestines and with the bile." The only definite and satisfactory information in regard to this matter I have been able to find is in a recent remarkable paper by Dr. Schuster, of Aix la Chapelle, a reprint of which from the *Journal of Cutaneous and Venereal Diseases* (Volume I, Number XII) I received through his courtesy a few months ago. In this he states that, since 1881, he has made a series of more than one hundred examinations respecting the elimination of mercury in syphilitic patients, who were either still under treatment by mercurial inunction, or had been treated thus for some longer or shorter time (one to twelve years). At first the urine only was tested for mercury. During these examinations mercury was often found, but rarely in large quantity, not only during but also some weeks after mercurial treatment. Frequently, however, the mercury was not found in the urine either during or after treatment, especially in those cases where it would have been particularly expected, from the quantity employed for a long time. From this he concluded that, "(1) *Mercury is irregularly eliminated by the urine;* (2) The mercury introduced by inunction either remains stored up in the organism—or else it is excreted in some other way." In order to test this latter point he proceeded to the examination of the fæces and found that mercury was always present in large quantities. He found as a result of forty fæcal examinations that "mercury was found regularly in relatively large quantities, during the course of inunction (the earliest examination was made ten days after the beginning of the treatment). Mercury was found in the fæces *for five and a half months after the end of the course.* During this time it was found regularly in the fæcal examinations made at intervals of from ten to fourteen days.

"Mercury was found in the fæces in all the cases in which it was found in the urine. On the other hand *it was frequently not present in the urine where it was found in the fæces.*

"After prolonged courses of inunction mercury was found in the fæces at times in so considerable an amount that it could be determined quantitatively."

From these investigations he concludes that, "(1) *The elim-*

ination of mercury by the fæces is continuous; (2) Accordingly *the persistence of mercury in the organism does not occur.*" He further says: "In a large number of patients, who had been under my care eight months and one year before and who had been under mercurial treatment elsewhere from two to twelve years, I have had both urine and fæces tested for mercury, but it was not found in any case." He then says: "It is possible that some one or other may have found mercury in the fæces previous to my examination. But my investigations show, not only that mercury is eliminated by the fæces but also that mercury is regularly and continuously eliminated by the fæces and that this elimination reaches its end at a time to be determined according to the duration of the course of inunction."

In concluding, the results of his important and interesting investigations are formulated as follows:

(1) *That mercury, introduced in the organism through the skin or in any other way, is eliminated continuously.*

(2) *That this elimination in the ordinary mercurial treatment is complete after the lapse of six months.*

(3) *That therefore there is no persistence in the organism of the introduced mercury.*

For the present we may, I think, safely accept the foregoing conclusions of Dr. Schuster. This we are bound to do until some equally competent investigator after equally thorough and extensive investigation shall have claimed to disprove them. We are thus prepared to combat successfully much of the prejudice which has heretofore existed in regard to the prolonged use of mercury in syphilis. We may confidently pursue the systematic treatment of syphilis by small doses of mercury for a very long period with the assurance that cumulative poisonous effects, endangering the health of the patient in after years, so often claimed by the opponents of this method, will not result from such treatment.

ENDEMIC OR EPIDEMIC JAUNDICE.

BY D. M. GREENE, M. D., PLAINFIELD, MICHIGAN.

I have watched medical journals for a report of an epidemic of jaundice, but as I have seen no such report, and having had a large number of such cases, I thought I would report a few of them with leading symptoms, hoping to hear from others upon the subject to know if it is really epidemic. I will pass as briefly over each case as I can and show them to be of the same character and likely from the same or a similar cause.

Case I.—Wm. W., aged twenty-five, called at my office December 1, 1886, and complained of slight pain in right side, sickness at stomach, and vomiting; had severe headache every afternoon; bowels had been quite regular and appetite good until two days previous. Examination: Pulse full, at 75; temperature, 100; tongue slightly coated white; eyes and skin quite yellow.

℞. Mas. hydr.. gr. x.
Sig. At night, and a dose of sulphate of magnesia in morning.

Then I put him on the following:

℞. Lactopeptine,
Bis. sub. nit., āā.................................. ℥ss.
Capsicum.. gr. vij.
Resin podoph...................................... gr. iij.
M. Div. ft. ch. xxv. Sig. One powder after each meal.

Case II.—Was called to see Geo. W., aged forty-four, December 14, 1886. For several days he had felt chilly in the afternoon; had a severe chill about two hours before sending for me at 3 A. M.; had been vomiting all night. Examination: Eyeballs yellow; skin yellow, but not very marked, until third day, when it was quite so all over body; pulse 82, strong; temperature, 100; tongue coated; urine scanty and dark—loaded with bile; bowels quite normal; appetite very good the day before, but does not care for food now; headache severe.

℞. Soda salicylate.................................. gr. v.
Capsicum pulv..................................... gr. i.
Pulv. ipecac. comp................................ gr. v.
M. ft. ch. number one. S. One of these every four hours.
℞. (Number two)
Potassium bromide,
Chloral hydrate, āā............................... gr. x.
M. Sig. Twice a day in one-fourth tumbler of water.

December 15: Better. Pulse, 70; temperature, 99; skin moist. The 16th, 17th and 18th he improved, when I prescribed

℞. Tr. nux vom.,
Spts. ammo. aromat., āā........................... ʒiv.
Tr. gentian comp.................................. ℥i.
Syrup, q. s. ft................................... ℥iv.
Teaspoonful after meals.

He made a slow recovery on account of previous poor health.

Case III.—Was called to see Mr. Wm. W., aged twenty-three, January 1, 1887. Had been vomiting for three days; headache ever day. Examination: Eyes and skin very yellow; tongue coated white; pulse, 95; temperature, 101; bowels moved every day until the past day or two; pain in region of liver and over stomach. Improved under the same treatment given in Case II and recovered in eight days.

Case IV.—P. J., aged seventeen. Saw her January 4. Eyes and skin yellow; liver enlarged and sore; had vomited two days; appetite gone; pulse, 100; temperature, 102; headache. Case continued for ten days and recovered. Symptoms not mentioned are like the rest of the cases.

Two days later was called to see her sister, *Case V*, B. J., aged nine years. She had about the same signs and symptoms as her sister W. W., Case II, lived in the same family as Case IV and Case V (P. J. and B. J.).

Case VI.—Mrs. C. G. C., aged fifty-eight, was taken sick January 10, and I was called soon after. Found her vomiting; liver enlarged, and sore; pain in stomach; conjunctiva slightly yellow. On the third day the eyes and skin were very yellow; bowels constipated, hard to get physic to operate; temperature never above 100; pulse from 100 to 120. Recovered in about two weeks.

Case VII.—Nat. W., aged four. I was called to see him January 6, 1887. Had been sick three or four days. Had been vomiting three days and still continued to vomit every twenty to thirty minutes. Temperature, 102; pulse, 120; liver very much enlarged and sore. He could not rest on left side; had a hacking cough increased by pressing upwards on liver. Complained of it being "hard work to breathe" except when standing. Eyes and skin very yellow; bowels had moved by physic; tongue coated thickly, white. He recovered in about sixteen days. Had severe headache and was dizzy first four or five days.

Case VIII.—Geo. J., aged thirteen. Was called January 6, 1887. He had been sick only during night. Vomited every few moments. Had some pain over liver and stomach. Liver enlarged; tongue slightly coated white. Pulse, 90; temperature, 99½. Case discharged in four or five days.

Case IX.—Mr. J. W. (North Lake), was brought here January 7, 1887. History same as the rest. Eyes and skin very yellow. Had been treated by two physicians; had been sick two weeks. His age I do not know but think it about twenty-two or twenty-three.

January 21, Geo. W., brother of Case IX, being *Case X*, was brought here a few days after. Had just commenced to get yellow. Had vomited only one day. Physical examination revealed that the liver was very much enlarged.

Case XI.—J. S. (Dansville), aged twelve. Was called to see him January 12, 1887. Had been vomiting two days. Eyes and skin yellow. Recovered in about ten days. Had all signs and symptoms of the rest.

Case XII.—Miss D. McM. (Fowlerville), aged sixteen. Was called to see her January 13, 1887. Found her prostrate from long continued vomiting; the history was about the same as the rest. Pulse 130, feeble; temperature, 101½. Liver enlarged and sore; soreness over stomach; tongue slightly coated. Recovered in two weeks.

Case XIII.—Mrs. C. J. (Mason). Was called to see her in consultation with Dr. C. Found her very yellow and weak. Had been sick three or four weeks. History of the case almost the same as the rest; had the main symptoms and signs. I told Dr. C. I had seen several cases of the same kind and spoke of thinking it endemic in my circle of practice. He said he had not thought of that, but remembered of having several cases within a short time.

Case XIV.—G. P. (Stockbridge). Was called to see him. He had severe bronchitis and also all the signs and symptoms of the above cases. Recovered slowly.

Case XV.—J. F., January 9, 1887, called on me and presented all the signs and symptoms of the above but less severe. January 12, Eugene F., his brother, being *Case XVI*, called me in when passing. Had been vomiting twenty-four hours. Had no pain but was very dizzy by spells and had no appetite.

As my report is getting quite lengthy I will not report names and dates of more cases, but will simply say that I have had in all twenty-two cases, all of which had the same general signs and symptoms. They all vomited frequently a yellowish mucus, and all had a rise of temperature with increased action of the heart, slightly coated tongue, anorexia, enlarged liver, eyes and skin very yellow. One of the cases I have not mentioned was Samuel D. (Gregory), blind in both eyes; was taken with vomiting, with a degree of tenderness on pressure over cardiac end of stomach. It gradually progressed, and on the third day the liver became sore, and he then began to get yellow. The cause seemed to be a catarrhal inflammation of the stomach and duodenum.

In conclusion will say, I should be pleased to hear from physicians all over the state and, in fact, from other states, that I may know if it be endemic or epidemic.

I used several different remedies and found

	Soda salicylate	gr. v.
	Pulv. ipecac. comp	gr. v.
	Capsicum	gr. i.
M. S.	Ft. ch. number one every four hours.	

and after a day or two, when vomiting ceased—

℞.	Acid nitro-mur. dil	℥i.
	Ext. belladonna fl	ʒi.
	Glycerin et syrup, q. s. ft	℥iv.
M. S.	Teaspoonful in water three times a day before meals.	

to relieve vomiting and clear up the skin, restore in fact all suspended functions, better than anything else I used, and Dr. C., of Mason, told me the same, or about the same, did best for his patients.

No case that I treated was sick over sixteen days, and the earlier treatment was begun the sooner they recovered. If not treated for several days, or improperly treated, the disease seemed to assume a chronic form. I think the acid was well borne by all cases except one (Case II), who had previously tried it and could not take it.

CLINICAL LECTURES.

MEASLES.

BY FRANK E. WAXHAM, M. D.,
Professor of Diseases of Children in the College of Physicians and Surgeons, Chicago, Illinois.

GENTLEMEN: I invite your attention to-day to the subject of "measles," *rubeola or morbilli.* Measles may be defined as an epidemic contagious disease characterized by a peculiar eruption occurring on the fourth day, preceded by catarrhal symptoms and followed by desquamation.

In regard to the causes we would say that it extends by epidemic influence and contagion. It is, indeed, one of the most contagious of eruptive diseases, more so than scarlet fever, and ranking with variola, varioloid and varicella in this respect. The contagiousness commences with the eruption and continues until after the period of desquamation. Like the contagion of scarlet fever, it may be retained in the furniture of the appartments for weeks or months, and it may be carried by the attendant to others. The period of incubation is somewhat longer than that of scarlet fever, it being about twelve days on an average, while the period of incubation in scarlet fever is only about six days. That it is an epidemic disease we cannot question, for in some seasons of the year, particularly, it is very prevalent, while at other seasons we never encounter the malady.

In regard to the pathological lesions we would say that the malady so rarely proves fatal that we are often in doubt as to their true nature; yet when death occurs it is usually from complications. Very rarely, indeed, does an uncomplicated case of measles terminate fatally. Occasionally an attack of malignant measles may prove fatal unassociated with any other disease, and in this case the principal lesion is the alteration of the blood; it usually appears darker than normal, and in addition there are ecchymotic patches observed upon the mucous membranes corresponding with the dark, livid or purple petechiæ that occur on the surface of the skin.

In regard to the symptoms we would divide the disease into three stages the same as in scarlet fever, namely: (1) the period of invasion; (2) the period of eruption; and (3) the period of decline or desquamation. The premonitory symptoms are those characteristic of a sharp, severe attack of inflammation of the mucous membranes of the nostrils, the larynx, the trachea and the larger bronchial tubes. The initial manifestations are loss of appetite, fever, restlessness, thirst, together with the symptoms of a bad cold; eyes are suffused, watery more or less; discharges from the nostrils frequent; hoarse and harassing cough; pulse ranges from 110, 115 to, possibly, 120. The temperature ranges from 100° to 102°, and, in exceptional cases, to 103°. During the premonitory stage catarrhal croup is an occasional symptom. All the symptoms which we have enumerated usually persist for about two to six days, but with an average of four days, the stage of invasion lasting four days, the eruption appearing upon the sixth day. The eruption first appears upon the forehead, about the ears and neck, and then extending rapidly to the trunk and extremities. It occurs first in the form of papules; indeed these papules often resemble flea-bites; they are separated by healthy skin, but soon coalesce so as to form a broad, flat blotch. The eruption is slightly elevated above the cutaneous surface; we can hardly observe the elevation with the eye, but by passing the finger carefully over the eruption we can detect it. The eruption spreads rapidly, so that by the end of the second day it has completely covered the whole body. It is more marked upon some portions than upon others, not equally or symmetrically diffused over the whole surface. The cough which is hoarse, frequent and harassing; the watery eyes, the coryza,—all these symptoms persist together with the febrile action. Vomiting is an occasional symptom, but during the initial and eruptive stages it is less common than in scarlet fever.

Occasionally we meet with *rubeola nigra*, or what is sometimes called the "black measles." This, by some writers and teachers, is considered to be a distinct disease from the ordinary measles, but by others it is believed that the dark-colored eruption which has given the name to the malady, is simply the result of some intense internal inflammation, as, for instance, an intense *capillary bronchitis*, or a *severe pneumonia*, these diseases interfering with a proper decarbonization of the blood, consequently the eruption is livid, purple, dark-colored. In other cases, however, we meet occasionally with this form of measles where there is no internal congestion or inflammation; no complication whatever. The pulse is rapid, weak and very feeble, and there is every indication of exhaustion. Occasionally a patient suffering from an attack of this form of measles will recover, and yet it is a most dangerous disease.

The period of eruption lasts about four days, so that by the eighth day the eruption has subsided, appearing, you will remember, on the fourth day, reaching its maximum at the end of the second day, then remaining stationary one or two days, and gradually disappearing, so that about the fourth day the eruption has disappeared. With the disappearance of the eruption we come to the third stage of the disease, the period of decline or desquamation. During this stage the cough becomes less hoarse, less frequent and harassing; the pulse less rapid; the temperature less elevated; the appetite gradually returns; there is a disposition on the part of the patient to play, and convalescence rapidly ensues. After the disappearance of the eruption desquamation occurs; it is an exfoliation of the epidermis in the form of minute scales. The desquamation is not as characteristically marked as in scarlet fever; the scales are smaller, finer; it does not usually last more than two, three or four days. In many instances desquamation is scarcely observed.

Complications.—A few words in regard to the complications of the disease. The most frequent one is capillary bronchitis. Bronchitis of the larger bronchial tubes is not considered a complication of the disease, but it is as much a part of the disease as the eruption itself, but if the inflammation has extended from the larger bronchial tubes into the smaller bronchi, and we get the rapid respiration, a high temperature, feebleness, exhaustion, and dangerous symptoms of capillary bronchitis, it may be properly considered a complication. Capillary bronchitis occurring during the stage of invasion often retards the appearance of the eruption. Appearing during the second stage it often causes the disappearance of it.

Pneumonia: Another complication, a less frequent, and still a very dangerous one, is pneumonia. It is usually of the catarrhal form, due to the extension of the inflammation from the bronchi to the parenchyma of the lungs. It is indicated by the rapid breathing, the painful cough, and by the physical symptoms.

True Croup: Another complication, and a very dangerous one, is true or membraneous croup. During the stage of invasion we may have false or spasmodic laryngitis. True croup more frequently occurs during the stage of decline or desquamation.

Diphtheria: Another complication is diphtheria; the inflammation of the fauces, trachea and larynx, which is characteristic of measles, invites an attack of diphtheria, especially when it is prevailing epidemically.

Entero-Colitis: Still another complication is entero-colitis, an inflammation of the small and large intestines. No doubt, this is quite as frequent a complication, and a serious one. These are the most common complications that result from measles.

Diagnosis.—The diagnosis should be made without difficulty; we distinguish measles from scarlet fever by the catarrhal symptoms, and by the absence of the pharyngitis, which is characteristic of scarlet fever. The pulse is different; we do not observe that rapid, bounding pulse characteristic of scarlet fever. The eruption of measles occurs in the form of papules, and the patches are of a dark-red color, while in scarlet fever the eruption manifests itself in minute fine points or punctations; there is no elevation of the cutaneous surface.

How to distinguish between measles and roseola: In roseola the eruption is a finer one and corresponds more closely to that of scarlet fever, and of course in roseola we do not have the catarrhal symptoms that are so characteristic of measles.

Occasionally measles is mistaken for small-pox or variola, but by careful attention to the symptoms this mistake ought not to be made. In measles we get the catarrhal symptoms which are scarcely observed in variola; not so marked as in a case of measles, and we are speaking now of the first day of the eruption. During this time the mistake may be made; afterwards, it is very seldom that such a mistake is made. But during the first day we will have papules in a case of small-pox; the same with measles, but you must remember that in a case of measles we have the marked catarrhal symptoms, while in a case of small-pox we have almost entire absence of catarrhal manifestations. Again, in a case of small-pox we usually have more vomiting, a higher febrile action, and this febrile action disappears with the appearance of the eruption; but the fever and the initial symptoms of measles do not disappear with manifestation of the eruption. If you feel uncertain with regard to your diagnosis, simply wait a few hours, or even a day or two. In a case of small-pox these papules will be followed by vesicles; not so in a case of measles, for in measles the eruption remains as papules entirely.

Prognosis.—The prognosis is always favorable. Of course, if some grave complication occurs, or some internal inflammation, then the prognosis would be grave accordingly, but in a simple, uncomplicated case of measles there is little or no danger.

Treatment.—We have but little to say in regard to the treatment of the disease. Mild remedies will be sufficient. We should place the patient in bed always, no matter how mild the attack, and we should keep him there until the disappearance of the eruption. This rule holds good in all of the eruptive diseases,—in measles, scarlet fever, variola, varioloid or varicella. Always make this a rule; even if the attack is a mild one, it is safe. The temperature of the apartment should be even constantly,—at about 70° to 75°; and the diet should be plain and simple. The cough usually requires some attention, and for this we may give a Dover's powder, a half, one, two, three or four grains according to the age of the child, to be repeatad every three or four hours; or we may give a mixture of (say) syrup of Squill's, syrup of ipecac, camphorated tincture of opium, of each half an ounce; teaspoonful to be given every two or three hours for a child four or five years old. Any simple expectorant containing an opiate to quiet the cough will answer the purpose. In a case of malignant form of measles (black measles) we must use stimulants, such as brandy, carbonate of ammonia; these are most important, together with quinine, but in the simple form of measles we need to do but little more than to keep the child in bed; keep the temperature even; give a light, plain diet; and some expectorant cough mixture containing an opiate. The principal duty of the physician will be to guard against the complications, and to treat them when they occur. In a case of capillary bronchitis or broncho-pneumonia, counter-irritants should be at once applied to the chest. If these complications appear early and cause the disappearance of the eruption we should endeavor to promote the afflux of blood to the surface by counter-irritants. We may use warm water and mustard draughts followed by warm flaxseed poultices covered with oiled-silk. We will be careful, always, to give the people directions not to allow the child to go out of doors, not to leave the house for several days, or, perhaps, weeks after the disappearance of the eruption, especially in inclement weather. Too frequently, indeed, a child is allowed to go to an open window or to a door; the eruption will at once disappear in many cases, and you get some serious complication,—perhaps, an attack of bronchitis, pneumonia or croup. It is absolutely important to confine the child to the bed and thus avoid the dangerous complications that are so liable to ensue. There are no sequelæ that follow in the wake of this disease.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

CHRONIC COCAINE POISONING AND COCAINE MANIA.

Collected from recent literature
BY WALTER BERGER, LEIPSIG.

Since the author (*Aertzl. Ver. Bl. f. Deutschland,* Number CLXV, page 25, January, 1886), relying mainly on communications originating in America, first directed attention to the evil effects of the long continued use, but chiefly the habitual abuse, of cocaine, and prophesied that this misuse would also become prevalent in Europe, his prophecy has been confirmed by many published cases of cocaine habit. The German communications mostly relate to cases in which cocaine was used for the cure of the morphine habit; cases in which in consequence of the already debilitated condition of the system, a particularly favorable soil was found for the development of the harmful effects of the drug. Cases of pure cocaine mania are rarely read of in German literature, while in America where the habitual abuse of cocaine has been carried on for years, such cases more frequently occur.

In an article by T. F. Waugh (*Philadelphia Medical and*

Surgical Reporter, Volume LIII, Number XVIII, page 516, October, 1885) chronic cocaine poisoning is spoken of as nothing new. He states that long ago, while Peru was yet a Spanish colony, coca culture was forbidden on account of the harmful effects which use of the plant produced on the people.

According to the experience of American physicians, the long consinued use of cocaine, since it prevents the feeling of exhaustion, obviates mental depression and brings about a general feeling of serenity and good health, creates a craving which must be satisfied. The individual becomes nervous, tremulous, sleepless, loses his appetite and sinks at last to a miserable condition of neurasthenia. Jerome K. Banday (*New York Medical Journal*, September 26, 1885) assures us that the individual addicted to the habitual misuse of cocaine is infinitely more degraded and more an object of pity than the slave of opium or alcohol. Waugh (opposite citation) mentions cases in which abuse of cocaine led to complete ruin of the physical and mental powers. Breaking off the habit is not so easy and according to Obersteiner (*Wien. Med. Presse*, Volume XXVI, Number XL, 1885) as well as according to the experience of other physicians, is accomplished by no means without much difficulty, as is stated by some.

With regard to the action of cocaine on the system, Maerkel (*Berl. Klin. Wchnschr.*, Volume XXIII, Number X, 1886) thinks that it does not especially influence (at least not manifestly) the nervous system, but acts with unusual energy on the glandular system of nutrition; for he noticed that injection of cocaine produced salivation, swelling of the lymphatic glands near the point of injection, and even induration and swelling of the rudimentary mammary gland in a man. On the enormously increased glandular action, on the acceleration of metabolism, depend, according to Maerkel, the feeling of refreshment and comfort and the stimulating action of the drug; but exactly in this accelerated metabolism lies concealed the same danger, perhaps even a greater, as in every other extravagance in the organism constructed and operated on principles of the greatest economy. From temporary use of the drug injurious effects on the organism are little to be feared, because the waste of nutrient material can in great measure be replaced; but when the drug is habitually used it is very improbable that the supply of nutrient material carried to the glands is sufficient to correct the defect caused by the increased action of the glands. To confirm the correctness of the above view we have the fact that in Central America persons who use coca die mostly of phthisis which is brought on partly by disturbance of the lymph stream and metabolism, and is partly due to the premature wearing out and consumption of parenchymatous cells of the lymph producing tissues.

According to the experience of Erlenmeyer (*Deutsche Med. Ztg.*,Volume VII, Number XLIV, 1886) cocaine paralyzes the circulatory apparatus, the pulse rate is increased, the arteries are relaxed, there is disturbance of respiration and sweats are produced. Vaso-motor respiratory disturbances of various kinds are prominent symptoms of intoxication. That continued relaxation of the vascular apparatus is followed by great danger is evident. Erlenmeyer warns against chloroforming persons addicted to the cocaine habit.

Becoming habituated to the use of cocaine and thus in time weakening its effects on the system does not seem to take place. That habitual use of the drug does not protect against acute poisoning by it, J. A. Spear (*New York Medical Record*, Volume XXVIII, November 20, page 586, 1885) proves by a case of acute poisoning in a man who for a long time had taken hypodermic injections of cocaine.

On the mind the effects of the long continued use of cocaine are very prominent.

Heinemann (*Tagbl. d. 59, Versamml. deutscher Naturforsher u. Aertzte.*, Number VIII, page 316), who without success has tried cocaine in certain cases of derangement of the mind, more often found that given by the mouth or subcutaneously, use of large or small doses of the drug or taking the coca leaves brings on a psychosis which closely resembles ordinary paranoia hallucination, but can easily be distinguished from it by the general symptoms, by the course of the disease and by subsequent discovery of cocaine in the urine. On discontinuing the drug no new hallucinations appear, but the old delusions disappear only gradually. According to Obersteiner (*Die Intoxikations-psychosen Wiener Klinic 2;* February, 1886, page 44) symptoms of chronic poisoning after the continued use of cocaine appear very soon in some cases. The condition in chronic poisoning has much resemblance to delirium of alcoholism, namely, loss of appetite, sleeplessness and hallucinations are very characteristic. One or more of the special senses may become involved. Sensations of insects creeping over the skin (even sensations as if touched by the hands of strange persons) according to Obersteiner are very prominent. Also according to Erlenmeyer (*Deutsche Med. Ztg.*, Volume VII, Number XLIV, 1886), who did not observe cases of pure cocaine mania, but only such as were complicated with the morphine habit, the greatest symptom of the effect of cocaine on the mind in delirium, which appears in the form of madness with hallucinations (Verfolgungswahn): not all persons who have the cocaine habit come to this, but in most cases there are hallucinations relating to the sense of sight, temporary disturbance of the mind, weakness of the mental powers, loss of memory, constant dread of being injured. Especially common is a certain prolixity in conversation and correspondence, which, when united with a weakened memory, may lead to the greatest embarrassment and confusion.

Many still refuse, as Bornemann (*Deutsche Med. Ztg.*, Volume VII, Number LXXI, 1886) explains, to recognize the existence of a distinct cocaine psychosis, and seek to explain the affection by the very rare delirium acutum of morphine abstinence described by Levinstein, reported cases of which have very remarkably increased in number since the use of cocaine has become so general. It was thus in a certain case well known to Bornemann and published in *Archiv fur Psychiatrie und Nervenkrankeiten* (Volume XVII, Number I, page 259, 1886), being there described as a case of delirium from morphine inanition, though the fact that it was cocaine psychosis could hardly be overlooked. The daily dose of morphine withdrawn amounted to 0.2 gramme; at the same time 0.1 gramme of cocaine as the maximum dose was given every two hours during the the night. Once before and once after this treatment the same patient, under the care of Bornemann, had gone through a course of treatment for the morphine habit by withdrawing the drug, and although the amount of morphine withdrawn in each instance under Bornemann's treatment was greater than in the above published instance, still no delirium appeared. During the first course of treatment no cocaine was used; during the last it was allowed, though the dose of 0.1 gramme per day was not exceeded.

In a case recorded by Seifert (*Sitz. Ber. d. physik.-med. Ges. zu Wurtz. 4*, 1886), a patient had broken up the morphine habit with the aid of cocaine; since which, however, he has increased the dose of cocaine till the amount of 0.1 gramme per day was reached. On November 14, when Seifert saw the patient, he was restless, unusually excited, his language vehement and incoherent, and he almost presented the appearance of one demented. Gradual withdrawal of the cocaine now followed and was completed by November 20. During the withdrawal the patient became more quiet, had only occasional confusion of ideas and periods of agitation, but slept little.

Haupt (*Tagbl. d. 59, Vers. deutscher Naturf.*, Number VIII, page 316) observed a case of pure cocaine habit in a boy fourteen years of age, who had used hypodermic injections of the drug and had reached 4.0 grammes per day. The boy experienced severe hallucinations, and in the evening a condition of fear set in which increased till he was thrown into convulsive paroxysms.

Smidt (*Tagbl. d. 59, Naturf.-Vers.*, page 316, 1886) holds that in the cocainism of morphine-takers the severe symptoms of intoxication are due chiefly to the combination of the two drugs. He does not wish to deny on this account that cocaine alone causes a psychosis, but only wishes to warn against the especially great danger of the combined morphine and cocaine habit. In a case of this kind described by him (*Ibid*, page 315) the severe psychical phenomena disappeared immediately after the cocaine was discontinued (as in all other cases observed by him), and when, after complete withdrawal of the morphine in this case, cocaine was again given to combat the abstinence symptoms, only slight signs of the feeling of dread were noticed. On the other hand, in the case of cocainism reported by Bornemann (*Deutsche Med. Ztg.*, Volume VII, Number LXXI, 1886), in which a lady was treated with cocaine for cure of the morphine habit, after the cocaine was discontinued and then resumed symptoms of the action of cocaine were again soon noticed. No cocaine being given for six days, after three days' use of the drug, the previous psychosis characterized by a feeling of fear appeared once more. A second time no cocaine was given for seventeen days, when already in a few hours after cocaine was again brought into the system, symptoms of intoxication psychosis appeared.

A. Erlenmeyer, up to the time of publishing his paper, had noticed thirteen cases (eleven men and three women) of cocaine mania following the use of the drug for the cure of morphinism. Among the patients there were five physicians, two wives of physicians, three military officers and one of each an author, a civil officer and a landlord. The course of development of the mania for cocaine in a case complicated with the morphine habit Erlenmeyer describes as follows:

The stimulating, strengthening, so-called euphoric action which cocaine developes is only of short duration, but is always brought on anew by each cocaine injection (in Erlenmeyer's cases injections were always employed). Discontinuance of the injections is no longer possible, because the want of cocaine in the system is made known by various unpleasant, troublesome feelings which suddenly make the patient incapable of performing his duties; he needs the cocaine that he can work, he craves cocaine, he is seized with the cocaine mania. To combat this sudden disturbing action of cocaine on mind and body, where cocaine alone is taken, the patient falls back to morphia, and from now on both drugs are taken simultaneously; when morphine and cocaine are injected combined, the amount of morphine is increased at each dose; probably opium and chloral will also be called to aid; doses of one, two or more grammes of morphine, one to three grammes of cocaine daily, and, perhaps, in addition, several grammes of chloral hydrate in the evening were repeatedly employed in Erlenmeyer's cases.

According to Bornemann the victim of morphine looks to cocaine for help, mistakes the effects of the latter for those of morphine abstinence, seeks to remove them by more cocaine, until, unless he becomes enlightened and finds timely help, he finally becomes an inmate of an insane asylum. In three out of six cases known to Bornemann this was the end.

After large doses Erlenmeyer noticed rapid emaciation. Patients who for years had used morphine and whose nutrition remained good diminished rapidly in body weight from the moment large doses of cocaine were added, even though the daily amount of food was not decreased or catarrh of the stomach not present. The appearance of the patient is even worse than in the pure morphine habit. The complexion is pale, almost corpse-like, the eyes are sunk in, the flesh is soft; very soon there is sleeplessness. In one of Erlenmeyer's cases loss of power followed almost immediately the first cocaine injection.

The symptoms accompanying withdrawal and abstinence in pure cocaine mania Erlenmeyer has not had opportunity for studying. In cocainism complicated with morphinism the vasomotor symptoms (palpitation of the heart, cardiac weakness, disturbance of respiration, dyspnœa, syncope) are most prominent. Their intensity seems to be proportional to the size of the dose withdrawn and the rapidity of its withdrawal. Another symptom of withdrawal of the cocaine is depression of mind and loss of will power, a demoralization which lasts a long time.

The prognosis of cocaine mania complicated with the morphine habit is, according to Erlenmeyer, considerably more unfavorable than the uncomplicated morphine habit. Lasting results and security against future relapses are to be obtained only by a long course of treatment (four to six months) in a proper institution, under lock and key, by depriving the patient of his liberty, and keeping strict watch and control over him.

Bornemann calls attention to the danger to which persons near patients having the cocaine mania, but especially the cocaine-morphine mania, are exposed; he mentions two cases in which persons thus afflicted made attempts on the lives of those around them with firearms.

Erlenmeyer closes his paper with the words: "It is a sorrowful picture that I have here drawn; but I fear that I have not. selected colors dark enough. He who has seen the sudden, lightning-like mental, moral and physical destruction of one who has given himself up to cocaine, will let every optimism array itself against cocaine. There is only one article which causes devastation like cocaine, that is whiskey."

In an article on Obersteiner's paper (*Norsk. Mag. f. Lagevidensk, 3,* Volume XV, Number II, page 733, 1885) the writer very correctly says: "Though the action of cocaine is ever so great when taken internally, we have gathered such sad experience from chronic chloral poisoning, from the morphine habit, and in recent times from chloroformism, that we dare not risk to add to these a cocainism."

Obersteiner remarks that the fact that preparations of cocaine, for example, wine of cocaine, are publicly recommended and sold should not be lightly considered. Bornemann closes his paper with the words: "More urgently than ever in the case of any other drug are legal regulations and limitations needed for the sale of cocaine, which now, unfortunately, is too easily accessible to every layman."—*Schmidt's Yahrbucher,* Band CCXII, Number XII, 1886.

FRENCH LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

THE EFFECTS OF TOBACCO UPON THE INTELLIGENCE, AND PARTICULARLY UPON THE MEMORY.

Dr. Rouillard claims (*L'Encéphale*) that an impairment of memory is the most constant mental effect of prolonged use of tobacco. The author says: "This faculty (memory) has no special localization, but is extended throughout the encephalon. Intellectual manifestations are in direct relation with the cerebral circulation and resent the slightest disturbance, whether hyperæmic or ischæmic. The effect of tobacco upon the heart and blood-vessels is well known. When, then, from the use of tobacco, the muscular substance of the vessels becomes torpid, the blood, lacking its natural propulsion, circulates slowly and irregularly. This strikes at the root of the functional energy of the brain and lessens it little by little, the different faculties in different proportion, but the memory in particular.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

REPORTED BY WILMOT F. MILLER, CLINICAL CLERK.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.

CONTRACTION OF MOUTH FOLLOWING BURN: OPERATION.

Florence T., aged fourteen. Admitted October 6, 1886.

History.—When a year old she fell on a hot stove, burning her lips and cheeks severely. The burn healed in a short time. The scar tissue formed by the healing of the wound involves both lips and extends well out on the cheeks. The cicatricial band of the upper lip is very dense and unyielding. This band, with the adhesion between the lips at their angles, has greatly reduced the oral fissure. When opened the mouth is circular and less than one-half inch in diameter. She has great difficulty in introducing food into her mouth, and has defective articulation.

October 14: Clinic.—The patient being placed under the influence of an anæsthetic, incisions were made laterally one-half inch each in length. The cut edges of the mucous membrane and the integument of each lip were brought and held in apposition by numerous horse-hair sutures. Rubber adhesive plaster was now placed in the angles and over each raw surface to prevent the lips from again uniting.

October 18: Shown in clinic. The mouth was of normal size and could be opened widely. Articulation much improved. The edges were healed with the exception of a few granulating spots. Directions given to keep granulating surface separated.

November 1: Tendency for edges not to heal at the angles.

Shields of hard rubber were placed in each angle to prevent the newly formed lips from uniting.

November 11: Presented at clinic. Wound healed and edges of lips soft. Articulation much improved. The mouth is normal in size and shape. Discharged cured.

SERVICE OF T. J. SULLIVAN, M. D.,
Assistant to the Professor of Surgery in the University of Michigan.

FIVE CASES OF VARICOCELE: OPERATION BY ABLATION OF REDUNDANCE OF SCROTUM, WITH LIGATION AND EXCISION OF THE VEINS.

G. D. A., aged thirty-seven; farmer. Admitted to hospital October 27, 1886.

History.—Had his left testicle injured fifteen years ago from a violent blow. The testicle and scrotum became enormously swollen and extremely painful. Most of the swelling disappeared in a few days, but the testicle remained slightly enlarged and painful on pressure. Last summer his scrotum became pendulous and the left testis painful and enlarged. He came to the hospital to have his testicle removed, being told by several physicians that it was cancerous and his only hope was to have it removed. He has never had any venereal disease.

Present Condition.—General health good. He complains of a constant, dull, weary pain extending from the testis to his back and chest. The scrotum is very much elongated, over seven inches in length, and on the left side there is a large mass of varicose veins.

October 28: Presented at clinic under Dr. Sullivan. Diagnosis—varicocele. Patient placed under chloroform, and the redundant portion of scrotum removed by an incision parallel to raphe; the veins were ligated and cut away. All bleeding points were carefully secured and the flaps of the scrotum held together by means of hair-lip needles, horse-hair and silk sutures. Wound irrigated with bichloride solution and dressed with bichloride gauze.

November 2: The needles removed; wound healing rapidly.

November 20: The highest temperature was 101° Fahrenheit on evening of November 1. Wound healed. Dismissed.

G. McD., aged twenty-two; book-keeper. Admitted November 27, 1886.

History.—Patient received a kick upon the scrotum five years ago. Since then he has had a dull pain extending from his left testis down the inner side of his left thigh. Believing that the mass in his scrotum was a hernia he had a truss fitted and wore it about one week, when it was taken off on account of the increased pain it produced. His general health is good. There is a mass of distended veins connected with his left testicle.

November 30: Clinic.—Diagnosis—varicocele. Put under the influence of chloroform and the redundant portion of the scrotum removed. The mass of veins not being large they were not ligated. Flaps held together with hair-lip pins and horsehair sutures, and wound dressed with bichloride gauze.

December 1: Temperature 101° Fahrenheit; pulse 114. Fifteen grains of quinine were administered.

December 6: Needles were removed and wound dressed with iodoform and gauze.

December 9: Temperature 102.4° Fahrenheit. Quinine, fifteen grains.

December 21: Wound healed. Dismissed.

C. S., aged twenty; laborer. Admitted November 22, 1886.

History.—About fifteen years ago the patient noticed an enlargement of his left testicle, but does not remember of being injured. Four years ago Professor Franklin of the Homœopatic College of medicine performed the operation of ligation. The ligature was removed in a few days and he was dismissed from the hospital as cured, although he did not regard himself any better than before the operation.

His general health is good. There is a great mass of enlarged veins around the left testis; and his scrotum is very lax and greatly elongated.

November 26: Clinic.—Given chloroform, and all redundancy of scrotum removed; mass of veins ligated and cut away. Some of the veins had greatly thickened walls and had undergone fatty degeneration. Wound closed with hair-lip sutures and dressed with bichloride gauze.

December 1: Needles removed.

December 7: Discharged.

W. E., aged twenty-two. Admitted January 25, 1887.

History.—Two years ago he noticed an enlargement of his left testicle. It does not give him much pain or inconvenience excepting in the summer. There is a small mass of enlarged veins connected with his left testicle.

January 28: Clinic.—Given an anæsthetic and portion of scrotum removed; several vessels required the ligature. Enlarged veins ligated and removed. Wound closed with hair-lip sutures; and dressed with antiseptic gauze.

February 1: Needles removed.

February 6: Discharged.

J. G. M., aged twenty-one; farmer. Admitted December 2, 1886.

History.—Eight years ago while standing on a barrel, the head fell in, and he fell severely injuring his scrotum. Five years ago he first noticed an enlargement of his left testicle, but it has never been painful.

The veins of his left testicle are greatly enlarged, and scrotum relaxed and elongated.

December 3: Clinic.—Placed under the influence of chloroform; the redundant portion of the scrotum removed; all bleeding vessels carefully ligated. Enlarged veins removed; flaps held together with hair-lip pins, and wound dressed with bichloride gauze.

December 4: Sharp, severe pain in the left inguinal region; morphia, one-sixth grain.

December 7: Wound dressed and needles removed.

December 21: Discharged.

GENERAL CORRESPONDENCE.

PARIS LETTER.

TORNWALDT'S DISEASE: HYPERSECRETION OF LUSCHKA'S GLAND—INTOXICATION BY CORROSIVE SUBLIMATE—POLARIZED CURRENTS.

In a former letter we gave a summary of an able paper by M. Luc on the hypersecretion of Luschka's glands. We now summarize some clinical cases published by the same authority. M. Luc communicated the following cases of hypersecretion of Luschka's gland. The first was the case of a man of thirty-four, who presented all the symptoms of true ozena. The patient was examined with the Voltolini hook. The nasal pharynx was covered with scabs; in removing these one of them was found to have a soft extremity which was attached to the pharyngeal palate. When removed a slight antero-posterior indenture was discovered situated on the median line, between the choanæ and the projection of the atlas. This was evidently the orifice of the pharyngeal bursa. The point of the galvanic cautery knife in an incandescent state, was introduced into the cavity during three seconds. A slight discharge of blood ensued.

The patient was directed to syringe the nasal pharynx every day till within four days from the next examination. About twelve days later a fresh inspection showed that the dryness peculiar to the posterior wall had disappeared and only a few scattered purulent mucosities covered it. Posterior rhinoscopia showed that cauterization had converted the orifice of Luschka's gland into a rounded, open orifice. Fifteen days later all painful symptoms disappeared. The aspect of the pharynx was normal, though five days had elapsed since it was syringed. The orifice of the pharyngeal bursa had shrunk through cicatrization.

The second case was that of a woman of forty-four, suffering from slight ozena, concomitant catarrh in the pharyngeal bursa, and double tubo-tympanic catarrh. A notable retraction and a modified coloring of the tympanic membranes indicated chronic catarrh in the Eustachian tubes. The posterior wall of the pharynx was in a condition of excessive dryness and was covered with tenacious greenish scabs. The patient was relieved by washings of the nasal pharynx, but as usual the result was only temporary. The hearing was improved by repeated applications of the air douche. Two months later (August) the patient was again examined, and posterior rhinoscopia was effected. Besides the scabs collected in the nasal pharynx a scab was removed from the orifice of Luschka's bursa. On the 19th of August the galvanic cautery knife was introduced into this orifice. This was repeated on the 26th of August and the 8th of September. On the 16th of September no scabs were detected in the pharynx, but the dryness in the posterior wall continued, and scabs in the nasal cavities still remained. This may be explained by the abnormal size of the nasal cavities which retain the secretions of the mucous membrane.

The third case was that of a girl of eighteen who exhibited the usual symptoms of nasal pharyngeal catarrh. The patient further complained of a purulent issue from the left ear. The two nasal cavities presented different affects; on the right side the lower turbinated bone greatly hypertrophied, only left a small space between itself and the septum, whilst on the left side it was only slightly developed and the dimensions of the nasal cavity were above the normal size. Some scabs adhered to the nasal cavity. Cauterization of the orifice of pharyngeal bursa was effected on the 19th of August. Dressings of boracic acid were applied to the issue from the ear, which was checked by the 26th of August.

The naso-pharyngeal washings were ceased during two days. The pharynx was still in a state of dryness but showed no traces of scabs. The nose was perfectly disengaged. A fresh application of the galvanic cautery knife was effected. On the 16th of September the pharynx was in a normal condition, though not syringed for four days. The posterior wall was damp and free from any pathological deposit, as were the nasal cavities. There was a total disappearance of all the previous symptoms.

In a fourth case a woman of twenty-four was treated for hypersecretion of Luschka's gland with frontal cephalalgia. Eight days after cauterization the patient was cured.

The fifth case was that of a youth of eighteen who exhibited the principal symptoms of true ozena. The nasal cavities presented a normal aspect. Naso-pharyngeal washings were first prescribed. On the 9th of September cauterization of Luschka's gland was effected; on the 23d of September the patient was cured.

Dr. Luc concludes that whenever the presence of chronic pharyngitis is detected Luschka's gland should be cauterized. Energetic cauterization of the pharyngeal bursa causes the cessation of catarrh in this cavity and consecutive cure of the secondary pharyngitis. The concomitant symptoms of true ozena are not a counter-indication to the direct intervention on Luschka's gland, which will always check the pharyngeal and subsequently the nasal catarrh and diminish the secretions which have a tendency to accumulate in these two cavities. Posterior rhinoscopia effected with the Voltolini hook, and the large laryngeal mirror is preferable to the old method, in cases where the examination of the pharynx and more particularly of the pharyngeal palate is required.

At a recent meeting of the Biological Society MM. Doleris and Butte reported on a series of experiments carried out with the intention of showing that intoxication by corrosive sublimate, employed as an antiseptic, was possible, and of defining the symptoms and lesions of this special form of intoxication. The experiments were made on dogs, rabbits, and guinea pigs, there being fifteen animals in all. The solution employed was one gramme of sublimate to one litre of water.

I.—WASHING OF MUCOUS MEMBRANES.—These experiments were made on dogs, the solution being injected into the vaginal cavity. The injection of one litre of the solution produced, after a few hours, sometimes a simple diarrhœa with a yellow discharge, at other times *sanquinnolent* diarrhœa accompanied with vomiting of alimentary matter; the temperature remaining unchanged. These symptoms were of short duration, and the animal was rapidly restored. A continuation of the injections on the following days, and even when two or three litres of the solution were passed through the vagina daily for a fortnight, was followed by no accident whatever. It seemed that the mucous membrane, under these circumstances was no longer capable of absorbing the poison. The vagina presented a dry, pale, tanned appearance, and desquamation was much reduced.

II.—WASHING OF WOUNDS.—In these cases the authors found that when the wound was small and the washing of short duration, the accidents were generally of little importance; in order to bring about death, large wounds with cavities in which the liquid is permitted to stagnate, and long continued washings, were necessary. Rodents appeared more sensitive than dogs to the action of the sublimate.

(*a*) RODENTS.—*Symptoms.*—A gradual lowering of the temperature was observed in these animals, which from 38° centigrade may fall as low as 33° on the last day. There was also extreme weakness, the animals being unable to walk or even to stand. The urine diminished and became slightly albuminous on the second day, taking a dark yellow color on the addition of cupro-potassic liquor, but producing no precipitate and no signs of glycose reaction. Death happened thirty-six, forty-eight or seventy-two hours after the washing, according to the quantity of the solution employed.

Anatomic lesions.—The brain, lungs, liver, bladder, and the pancreas were found to be in their normal condition. The left ventricle of the heart was much contracted and contained scarcely any clots, whereas the right ventricle was absolutely full. The œsoghagus and the stomach were healthy. The mucous membrane of the small intestine presented a yellow color with a few disseminated vascular arborizations. There was considerable hyperæmia of the cæcum and the colon; with effusions of blood under the mucous membrane, and near the edges of these effusions necrosis of the membrane was occasionally met with. The kidneys were somewhat enlarged; their surface presented a pale aspect with occasional white spots. The cortical substance was pale and composed almost entirely of white-yellowish streaks, representing the canaliculæ filled with calcareous deposit; a quantity of this white-yellowish substance treated with sulphuric acid and examined by the microscope revealed numerous crystals of sulphate of lime. Also hyperæmia of the medullary substance; the pyramids were red, their color forming a striking contrast to the pale cortical substance. When death took place rapidly (twenty-four hours), the renal and intestinal lesions were found to be unaccentuated.

(*b*) DOGS.—*Symptoms.*—For a time the temperature remained normal, or rising slightly in some of the animals; it was only towards the end that it began to fall, and, on the last day in one case, it reached 27°.9 centigrade. The diarrhœa which was almost always composed of bloody discharges; and the vomiting appeared constantly on the night following the washing, and continued throughout the entire duration of the intoxication. During the first days the animals did not seem to be much affected, but finally became so lean and weak as not to be able to stand up. In one animal, whose large wound with cavity in the back was washed for half an hour, death supervened on the fifth day, and was preceded by general convulsions, appearing by access, and also by slight permanent convulsions of the muscles of the jaw, eye, and neck; the final temperature being only 27°9 centigrade. The urine was constantly albuminous from the second day, and turned yellow on the addition of the cupro-potassic liquor. The absorbing power of the blood remained normal, consequently there was no alteration in the hæmoglobine. Death supervened four, five, ten, and twelve days after the washing; and, as in the case of the rodents, was more or less rapid according to the quantity of solution employed.

The fatal termination seemed to be due principally to renal alteration, the last days showing considerable accumulation of urea in the blood.

Anatomic lesions.—Stomatitis and gingivitis were generally absent; the lungs and spleen healthy. In a few cases of rapid death, the liver was congested. In one case the pancreas was very much congested. Occasionally the brain presented slightly congested points. The left ventricle was contracted and contained much less clot than the right ventricle. The small intestine on a level with the duodenum bore a strong yellow color. There was hyperæmia of the colon, the longitudinal folds of which being of a black-red hue and united by transversal streaks of the same color; numerous ecchymoses disseminated under the mucous membranes. In the inferior portions of the rectum, numerous black spots were constantly found, the largest among which did not exceed in diameter that of a small lentil, and were formed of blood deposited under the mucous membrane. No ulcerations were observed in the dogs. The volume of the kidneys was found to be augmented, and the capsule occasionally adherent; the surface was pale, yellowish, and, in certain cases slightly friable. A cut surface of the cortical substance presented a pale appearance with numerous white-yellowish streaks, opaque, and separated by rare intervals of a reddish hue. There was acute parenchymatous nephritis. Among the dogs no calcareous deposit was found in the tubuli. The microscope showed that fatty degeneration had taken place in the epithelial cells of the canaliculæ in the cortical substance, filling their lumen. The glomerules were congested.

From these experiments the author draws the following conclusions:

(1) The practice of washing healthy mucous membranes with corrosive sublimate seems to present no danger; and, with the exception of the slight accidents following the first washing, may be considered as inoffensive. (2) Sublimate employed in washing large wounds provokes bloody diarrhœa, vomiting, albuminuria, progressive weakening, and often death, which is occasionally preceded by considerable lowering of the temperature. (3) The anatomic lesions are found especially in the colon and in the kidneys. There is hyperæmia of the colon, with effusions of blood under the mucous membranes; and near these effusions occasional necrosis of the membrane (Prevost, Charrin, and Roger). The kidneys are affected with acute parenchymatous nephritis, and the straight tubes of the cortical substance are filled, in the rodents at least, with abundant calcareous deposit (Saikowski and Prevost). (4) The excess of urea in the blood, a sign of renal insufficiency, shows that it is to the renal lesion that must be attributed the principal cause of the fatal termination, when it takes place a certain number of days after the washing.

Practical Conclusions.—(1) The greatest care should be taken in examining the genital organs before application of the solution. In the greater part of the cases of death from this poison, which have been noticed in women after confinement, there existed deep wounds and extended lacerations in the neck of the uterus and the vagina. In such cases the sublimate should be rejected. (2) The elevation of temperature sometimes observed in women is superior to that found in animals; but this is explained by the intensity of the intestinal lesions (gangrene, ulcerations), which are much more accentuated than in the animals, and also by the traumatism or septicæmia continuing in the uterine cavity in spite of abundant washing of the vagina. This elevation of temperature is therefore not a sign of mercurial absorption. (3) The lowering of the temperature is, on the other hand, an excellent sign of intoxication; its value increasing in proportion to the gradual development of the symptom. (4) A daily examination of the urine is indispensable whenever sublimate is used in washings. The albuminuria which rapidly arises is a good sign of the absorption of the sublimate, as is also the yellow color of the urine, obtained by boiling it with Fehling's liquor. (5) An examination of the blood, discovering an accumulation of urea, shows renal insufficiency. This is an important sign, and indicates grave disorder in the kidney. The author finally concludes that the use of sublimate in obstetrics is excellent for disinfecting the skin, the hands, and instruments, but that it is dangerous to employ it on wounds of the genital organs. In surgery also, its use should be restricted to cases in which the wounds are small and superficial, and even then the washing should be done as quickly as possible.

At a recent meeting of the Paris Biological Society MM. Onimus and Larat presented a series of tracings which described the contractions produced in the muscles of a frog's leg, by means of polarized currents from the human body. The first series of experiments consisted of galvanising ordinary water and passing the currents determined by the electrolysis of this water through the gastrocnemian muscle of a frog's leg. MM. Onimus and Larat noted at the moment of contact and interruptions of the current a series of sharp, muscular shocks analagous to those produced by a direct current. In a second series of experiments the authors applied the electric battery to one of their own limbs, and by obtaining the secondary polarized current thus engendered in the substance of the tissues, they likewise produced contractions which lasted some time after the cessation of the direct current. These facts confirm the opinion of Mattenci, Becquerel, Legros, and Onimus concerning a mode of action of electricity upon living tissues, and also indicate the theory of electrotomy upheld by Erb, Dubois-Raymond, and the entire German school is erroneous. V.

HEALTH IN MICHIGAN DURING FEBRUARY.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of February (four weeks ending February 26), 1887, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, bronchitis, tonsilitis, consumption of lungs, influenza, pneumonia, intermittent fever, diarrhœa, erysipelas, inflammation of kidney, measles, remittent fever, whooping-cough, inflammation of bowels, typho-malarial fever, dysentery, diphtheria, typhoid fever (enteric), scarlet fever, inflammation of brain, puerperal fever, membranous croup, cerebro-spinal meningitis, cholera infantum, and cholera morbus.

For the month of February, 1887, compared with the preceding month the reports indicate that remittent fever decreased in prevalence.

Compared with the preceding month the temperature in the month of February, 1887, was higher, the absolute humidity, the relative humidity, the day ozone and the night ozone were more

Compared with the average for the month of February in the nine years, 1879 to 1887, intermittent fever, remittent fever, pneumonia, diphtheria, consumption of lungs, and influenza were less prevalent in February, 1887.

Including reports by regular observers and others diphtheria was reported present in Michigan in the month of February, 1887, at thirty-four places, scarlatina at forty-two places, typhoid fever at sixteen places, and measles at twenty-four places.

Reports from all sources show diphtheria reported at twenty-two places less, scarlet fever at six places more, typhoid fever at two places more, and measles at three places more in February, than in the preceding month, January, 1887.

HENRY B. BAKER, M. D., Secretary.

LANSING, March 3, 1887.

EDITORIAL PERISCOPE.

ACTINOMYCOSIS HOMINIS.

Actinomycosis as occurring in cattle was first described by Ballinger in 1877, as a condition in which sarcoma-like tumors were met with, associated with a peculiar growth which, from its structure, was named the ray-fungus or actinomyces. In man this organism was observed and described by Israel in 1887, who published a most complete account of the disease in 1885. The disease is defined by Ziegler as a progressive inflammatory affection, set up by a certain fungus—the actinomyces; resulting in the formation of granulations and fibrous tissue, and in suppuration; attacking human beings, cattle and swine, and communicable to cattle by inoculation.

An instructive resumé of the present knowledge of the disease is made by Dr. Skerritt, of London, in the January number of the *American Journal of the Medical Sciences.* In this article he reports the history of a case illustrating the course of actinomycosis when the lung is primarily attacked, and which presents certain features of special interest.

The fungus occurs as small globular masses, commonly about the size of a millet-seed, usually of a pale yellow color, but at times white, brown, green, or speckled, with a surface closely covered with palisade-like rows of clubbed bodies which give it a mulberry-like appearance. If seated in the tissue, each portion of fungus is surrounded by inflammatory products forming a nodule which in its structure may exactly resemble a tubercular granulation. If the irritation is sufficiently intense, the inflammation goes on to suppuration, when the fungus lies detached in the abscess-cavity or is expelled with the pus.

The pathogenesis of the disease is obscure. The micro-organism has never been found inside of the body, and nothing is known of its development. Dr. Israel recently reported a case in which a foreign body was found in the actinomycotic pulmonary cavity which proved to be a fragment of a tooth. This he regards the first positive proof of the view he had previously advocated, namely, that pulmonary actinomycosis does not result from the inspiration of germs in the air but from the asperation of germs from the oral or adjacent cavities, carious teeth evidently being one of the primary seats. This is in harmony with the history of most of the recorded cases, in these it was noticed that the teeth were defective, and in several the malady originated at the site of decayed teeth or of a diseased portion of the jaw.

The fungus may enter the body by the mouth and pharynx, the respiratory passages, and the digestive tract. Dr. Skerritt points out that, whatever the primary seat of the disease, in any case of actinomycosis generalization of the growth by embolism may occur, and this not uncommonly after the tumor has long had a comparatively inactive local existence. The dessemination of the fungus will be accompanied by irregular recurrent rigors and the usual symptoms of hectic. Attempts at cultivation of the micro-organism have failed until the past year, when Professor Bostrom succeeded in making artificial cultivations of the fungus. The growth, however, thus obtained, has not produced the disease by inoculation.

A remarkable feature in the history of actinomycosis is well shown in the case of growths occurring in the neck—that is, migration of the tumor. In one instance recorded by Israel a tumor which in August was in the submaxillary region had by December reached the level of the thyroid cartilage.

Up to the last few years this disease has propably been confounded with scrofula and cancer. Professor Billroth now thinks that the abscesses of the tongue, which he opened, the cause of which he could not explain, were dependent on actinomycosis.

CONDENSATIONS.

A Crank.—Erlenmeyer calls cocaine the third scourge of humanity; alcohol and morphia being the other two.

Patent Medicines.—The Russian government has prohibited the importation of patent medicines; the list of articles published containing about eight hundred items.

The Medical Standard is a new thirty-two page monthly journal that announces itself to "fearlessly voice the interests of the entire profession, regardless of personal, sectional, or other restrictive considerations." It is published in Chicago by G. P. Engelhard & Company.

The Journal of Dietetics.—A new journal by this name, published quarterly, appears with its first number dated January, 1887. It will devote itself to investigations into the physiology and pathology of digestion and nutrition, and the relations of regimen to practical medicine. It is published by J. B. Savage, Cleveland, Ohio.

Glands of the Lips.—An abnormal condition of these glands producing an acid excretion is pointed out by Dr. Welch, as the cause of softening and decay of the labial surface of the front teeth. The acid secretion may be caused also by a tendency to acidity in the system. The effect of the acid saliva upon the teeth is the same; the abstraction from the structure of the tooth, its lime, which is the prolific cause of caries.

An Item of English Medical Etiquette.—According to the *British Medical Journal* it is considered obligatory for the recently arrived practitioner to call at as early a date as possible upon every duly qualified, legitimate medical practitioner resident within a reasonable distance of his own selected place of abode, and courteously announce his intention to practice in the locality.

Achieved Honors.—Dr. Hunter McGuire, of Richmond, Virginia, recently received the honor of being made Associate Fellow of the Philadelphia College of Physicians at its Centennial celebration. This organization was founded by Dr. Rush. When handing the diploma to Dr. McGuire, the president, Dr. Mitchell made use of the following words: "distinguished as a surgeon in war and peace, a teacher and practitioner of surgery, president of the American Surgical Association."

The "Antiseptic Shake."—The *New York Medical Journal* is authority for the following: The "antiseptic shake" has become a well recognized conventional in the clinics of the city. The surgeon about to operate extends to his invited guest not his hand but his elbow, which is gently seized by the latter, a slight pendulum motion is made, the courtesies of the day exchanged and then the quasi-anatomical relations cease. Thus it is shown that true courtesy is not inconsistent with microparasitical innocuousness.

Period of Gestation in Animals.—Dr. Collin, a French veterinarian, in a recent paper on animal obstetrics, cites the following facts, which may be of interest to medical men: "The period of gestation for individuals of the same species varies, but it is found that the duration of pregnancy is the same in the different gestations of the same animal. These facts are well known to stock-raisers, and they can estimate exactly the time of delivery of their mares and cows, excepting in the cases of primiparæ. The duration of pregnancy is shorter for female fœtuses than for male."

Removal of Ovaries in Nervous Disease.—The subject of spaying or castration is discussed in the October number of the *American Journal of the Medical Sciences*, by three eminent authorities. Sir Spencer Wells, Dr. Alfred Hegar, and Dr. Robert Bettey. In this discussion it will be seen that Drs.

Hegar and Bettey are in accord in repudiating the doctrine that normal ovaries are to be removed for the cure of nervous affections. Dr. Bettey introduces his argument with the following: "Within my knowledge, it has not been the practice of American surgeons to attempt the cure of mental and nervous disorders by the removal of healthy ovaries or of healthy tubes."

THE SOUTH-WESTERN MEDICAL GAZETTE.—This is the title of a neatly printed double-column, octavo journal of thirty-two pages, edited by M. F. Coomes, A. M., M. D., Professor of Physiology, and Clinical Lecturer on Diseases of the Eye, Ear, Nose, and Throat in the Kentucky School of Medicine; and J. B. Marvin, B. S., M. D., Professor of Theory and Practice of Medicine and Clinical Medicine in the Kentucky School of Medicine. These gentlemen express their belief that they can make the *Gazette* eminently a practitioner's journal, and the first number gives evidence that they possess the required qualifications.

FATAL RESULT FROM PASTEURISM.—One-third of the patients treated at the Russian Pasteur Institute at Odessa have proven failures, and in some instances it seems that death was due to the treatment. One case is cited in which this seems eminently probable. In July, 1886, a boy was bitten by a dog supposed to be affected with rabies. The patient was immediately sent to the Odessa institute, and received treatment according to the Pasteur method. In November he experienced a severe pain at the point of inoculation, and two days after died of rabies. The dog which bit the boy was not killed, and has shown no symptoms of hydrophobia.

THE EFFECT OF LONG-CONTINUED LACTATION ON THE UTERUS AND OVARIES.—In an article on this subject Dr. Sinclair concludes: (1) Lactation tends to prevent conception by its influence on the ovaries in retarding a return to a state of perfect ovulation. (2) After weaning the evolution of the ovaries becomes more rapid than during lactation. (3) After prolonged lactation a sudden cessation may be followed by a rapid evolution of the uterus and ovaries, giving rise to symptoms of hyperæmia of the ovaries and uterus. (4) Prolonged lactation may produce a superinvolution of the uterus and ovaries, causing where circumstances favor, a partial or complete prolapse of the wound.

A PATHONOMONIC SYMPTOM OF TUBERCULAR MENINGITIS.—In a paper read before the Chicago Pathological Society, Dr. Skeer called attention to a symptom which had not been mentioned in the literature on tubercular meningitis. The symptom is a small circle which forms in the iris, near to and completely surrounding the pupillary edge. It is very indistinct at first but in from twelve to thirty-six hours the whole margin of the iris will be involved, having become of a whitish or yellowish-brown color, and appearing irregular, thickened and somewhat granular. This cloud-like appearance is in some cases very evanescent, which makes it necessary to examine the iris at every visit. If it can be established that this symptom is co-existing always and only with tubercular meningitis it will be of great diagnostic value, for it is exceedingly efficient, and not less important to diagnose the tubercular from simple meningitis in the acute stage of the former disease.

LONG RETENTION OF DEAD FŒTUS IN THE UTERUS.—A case of more than ordinary interest is reported by Dr. Keister in the *Virginia Medical Monthly*. The patient presented herself for treatment to relieve a constant offensive discharge, and severe pains in lower region of her abdomen and small part of her back. Uterine examination led Dr. Keister to decide that the trouble was caused by a hydatid. The introduction of a sponge tent and the subsequent administration of several full doses of ergot resulted in the expulsion of a putrefied fœtus. Judging from the size of the cranium and other parts of the fœtus, it was supposed to be a five months' child. From the patient's statements, that her severest suffering commenced eleven months previous to the time she presented herself for treatment, and that the discharge from her womb became offensive about this time; it would appear that the child was retained in the uterus nearly one whole year after its death.

UTERINE FIBROIDS.—In a "Contribution to the Surgical Treatment of Tumors of the Abdomen," Dr. Keith says: "To the woman with a fibroid uterus, who has passed the best of her years in weariness and pain, middle age brings relief, and old age may be spent in peace. Hence the difficulty in knowing how far we are justified in advising interference for a disease that troubles for a time, though it rarely kills. It is often said that the operation for the removal of uterine fibroids is in much the same position now that ovariotomy was five and twenty years ago. It is not so. It never will be so. The history of these two diseases is entirely different. As a rule, ovarian disease is a merciless one; it goes on and kills. As a rule, the active existence of an uterine febroid is limited; it rarely interferes directly with life. * * * They have not much to gain by chancing a dangerous operation, and they may lose much, having much to lose."

MASKED HEART DISEASES.—Dr. Hollis calls attention in a paper that heart disease may be masked in a patient by one of the following reasons: (1) The conventional signs of disease of the organ may be altogether absent; (2) The ausculatory or other evidences of cardiac disorder may point to lesions other than those actually present; (3) Finally, the signs of heart disease may be so masked or obliterated by urgent local symptoms developed elsewhere as to be overlooked during the life of the patient. The author cites, under the first head, that in cases of cerebral hæmorrhage enormous *hypertrophy of the heart* may occur without any clinical evidences of such a condition. *Fibroid disease of the heart* is also frequently unaccompanied by any distinguishable signs of cardiac incapacity. *Aneurism* of the heart is seldom diagnosed clinically; and the symptoms of true *fatty degeneration* are very obscure; and *adherent pericardium* may exist without being detected by any definite physical signs.

DIPHTHERIA.—In a recent very practical paper on diphtheria by Dr. Wm. Porter, of Saint Louis, we find the following terse suggestions:

Many of these almost purely local conditions suggest a doubt as to their specific nature. It is well to give the patient the benefit of the doubt, and to treat urgently all suspicious-looking exudations upon the surface of the respiratory tract.

Practically a certain number of cases of diphtheria are constitutional from the beginning, the point of infection being in some recess of the naso-pharynx or larynx and easily overlooked, or is beyond the range of vision. I am not sure but that infection may occur from primary invasion of the membrane of the alimentary canal. Klebs, in the Second Congress of the German Physicians, speaks of a diphtheritic involvement of Peyer's patches resembling the reticular appearance in the early stage of typhoid.

In by far the greater number of cases the rapid multiplication of the bacteria—whether sphero-bacteria, as are found in severe cases, or whether short and slender rods, as in milder cases—produces an inflammation of the mucous membrane, exudation takes place, the epithelial cells die and the bacteria pass into the blood and rapidly multiply throughout the circulation.

Even should we deny, with Beale, that the contagium is bacteria, we still must admit that the hypothesis of local infection furnishes the most rational explanation of the sequence of symptoms. Granting this, we have two purposes in treatment in the early stages of diphtheria.

(1) To destroy or render harmless the local manifestation of the disease.

(2) To increase the power of resistance, in the general system, to infection.

DYSENTERY: A NEW MODE OF TREATMENT.—After the failure of various plans of treatment, Dr. Fordyce, in a serious case of dysentery, made a digital examination and "found a small free space about the sphincter that would hold about half an ounce. Into this *cul de sac* the fluids in the bowel from above accumulated, and as soon as the space became filled, the tenesmus commenced, and an immediate evacuation followed. Above this space the whole calibre of the intestine was occluded with soft pulpy œdematous mucous tissue, which was nearly impervious." A soft rubber tube was carefully passed beyond this point, through which, with the patient on his side, the colon was irrigated with four or five quarts of water as hot as could be borne. Then a quart or more of a one to ten thousand solution of bichloride of mercury was injected and allowed to return at once. Pain and tenesmus were at once relieved. A suppository of one grain of opium was then given, which afforded the patient the first sleep he had had since the beginning of the attack. After twelve hours some pain occurred, and the measures were repeated. In six days the patient was well.

CARDIAC DISEASE IN INFANCY AND CHILDHOOD.—In a recent lecture Dr. Rotch points out (*Archives of Pediatrics*) some interesting facts concerning cardiac disease in the young. The congenital diseases of the heart are most frequently found affecting the right side, the acquired diseases the left. All heart diseases in young children are essentially atrophic in character; lead to rapid wasting. Functional disorders of the heart do not arise until the later years of childhood, and are associated with and caused by overtaxed brains, imperfectly ventilated schoolrooms, and insufficient nourishment: in this connection an ounce of tea seems often to produce marked cardiac symptoms. Organic heart disease is very often associated with subacute rheumatism, the joints in general suffering but little, while the heart is very easily and very seriously affected. Compensation is far more easily established and more permanent in childhood than in after-life; and it is to be promoted by the adoption of the following measures: Promotion of sleep; comparative rest; exercise of a mild type, never active; good food, fresh air; promote the surface circulation with baths and gentle massage; give digitalis and iron, both drugs children tolerate remarkably well.

NEW PUBLICATIONS.

INSOMNIA; AND OTHER DISORDERS OF SLEEP. By Henry M. Lyman, A. M., M. D., Professor of Physiology, and of Diseases of the Nervous System in Rush Medical College; Professor of Theory and Practice of Medicine in the Woman's Medical College; and Physician to the Presbyterian Hospital, Chicago, Illinois. 12mo: two hundred and thirty-nine pages. Cloth. Chicago: W. T. Keener, 1886.

Professor Lyman gives in this work a mingling of mental physiology, mental hygiene, and brain treatment. In the first chapter the nature and cause of sleep is dwelt upon. Observations show that during sleep there is a reduction of physiological activity; that respiration is diminished; that circulation is less active; that the temperature is lowered; that the molecular processes of nutrition are reduced; that the secretions are of less amount; in fact, that instead of the processes of assimilation and nutrition being increased as was formerly believed, there is a universal reduction of all the vital processes. The vital forces pass into a potential modification. "In like manner there seems to be no good reason why that spiritual force or congeries of forces which constitutes the mind of man may not experience analogous transformations in successive periods of action and of repose." Professor Lyman believes that the mind sleeps, "it does not cease to exist—probably not even when death dissolves its material substrations."

The second and third and fourth chapters are devoted to insomnia: its causes; the disorders occasioned, and its serious consequences; the remedial agents to be used; and the treatment in particular diseases. The author does not believe that sleep and wakefulness depend upon the state of the central circulation, and condemns the carotid tourniquet. He argues that the condition of the nervous substance itself must be ascertained before medication can be understandingly made. It must first be determined whether the cerebral substance is in a state of normal activity or whether it is in a state of healthy, but excessive activity, or whether its seeming excitement is merely the result of irritable weakness. He divided all remedies to be used in the treatment of wakefulness into two classes; nervous stimulants and nervous sedatives. Nervous stimulants are not contradicted as might appear at first sight, but produce sleep as a consequence of a restoration of energy to those portions of the nervous system which serve to moderate the activity of the organ of the mind—the cortex of the cerebrum.

Chapters five, six and seven, are given to the discussion of dreams, somnambulism, and artificial somnambulism or hypnotism respectively.

The work is scholarly, written in a clear and pleasing style, and in a small space gives a wealth of information on the subjects expressed in its title.

PSYCHIATRY: A Clinical Treatise on Diseases of the Fore-Brain, Based upon a Study of its Structure, Functions and Nutrition. By Theodor Meynert, M. D., Professor of Nervous Diseases and Chief of the Psychiatric Clinic in Vienna. Translated (under authority of the author) by B. Sacks, M. D., Instructor in Diseases of the Mind and Nervous System in the New York Polyclinic. Part I: The Anatomy, Physiology and Chemistry of the Brain. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1885.

This work is preëminently a scientific treatise on the brain. The study begins with the structure and architecture of the brain. The convex, median, basal and dorsal surfaces are minutely described in order. The architecture of this complex organ or mass of organs is then shown. The net-work of fibres which enter into the structure and provide connections for its various parts are divided into two sets: the *fibræ propriæ* begin and end in the cortex; and the *projection* fibres, "which take their origin in the cortex but end in some peripheral gray substance, nearer to the nuclei of the cerebral nerves, say in one of the ganglionic masses at the base of the brain." Professor Meynert regards the name, projection-fibres, justifiable even if the course of these fibres were considered in a reverse direction. Pursuing this study, the author shows that the fibræ propriæ make up the arciform bundles of each hemisphere, and constitute an anatomical connection between the various convolutions, which are separated by fissures. These bundles are deservedly termed "association-bundles." They represent the union of various divisions of the fore-brain, to which alone these fibres belong, just as the projection-fibres, which are to be found everywhere in the cortex, represent the various organs and surfaces of the body to which these fibres extend through their prolongations—the peripheral nerve-tracts."

In tracing the course and connections of the bundles composed of these two distinct sets of fibres, all the parts of the brain, their relations, connections, and structure are ultimately described.

The study of the *minute anatomy of the brain* establishes the fact that this organ is constructed like the body tissue in general; that it consists of a mass of connective tissue in which the parts characteristic of the brain, the nerve ganglia, and their processes, as well as the nerve fibres, are imbedded.

Having discussed the structure of the brain, the author considers "a number of anatomical corollaries which will explain certain functions of the mechanism upon which physiological experiments had shed no light hitherto."

The following quotations will show the author's line of argument:

"A single functional energy only, though as inexplicable as all physiological forces, is inherent in the brain-cell, and that is sensitiveness. Actual sensation is developed by the evolution of equally unknown external forces, which we must suppose differ very materially from one another."

"These differences imply a difference in anatomical structures, not of the brain, but of the terminal organs of peripheral nerves. This is well illustrated in the case of the anterior roots, which are motor in function, simply because the terminal organ of nerves derived from the anterior roots are connected with muscles. The latter alone are motor elements, * * * Even if the auditory nerves possessed a specific *visual* energy, the media between the auditory nerve and the waves of light would be totally unfit to transmit visual rays."

"Special energies, therefore, depend altogether upon the peculiarities of the end-organs, and *sensitiveness is the only specific property of brain-cells.*"

"Within the *fore-brain* sensitiveness is converted into actual sensation."

In presenting the proof of cortical localization, the author points out that purely morphological data and a single pathological anatomical fact determine which regions of the cortex take upon themselves centrifugal functions. The pathological fact is the hemiplegia resulting from destruction of the prosenciphalic ganglia, and particularly from destruction of the nucleus lenticularis; and the morphological corollary which he establishes is: "that the cells of these ganglia will be able to receive more fibres from the anterior cortical region than from the posterior ventral region of the hemisphere, for these ganglionic masses, tapering as they do toward this latter region, will naturally have a lesser number of cells to put at the disposal of fibres coming from that direction."

Before discussing the results of physiological experiments he points out certain anatomical facts which render a functional differentiation of the various cortical regions highly probable. The experiments of Hitzig, Nothnagel, Ferrier, Munk and others are reviewed. The author does not believe that motor and sensory centres do not have prescribed boundaries, such as the convolutions would present.

Regarding the seat of intelligence he quotes the observation of Munk, that: "Intelligence is located everywhere in the cerebral cortex and nowhere in particular," and corroborates this view in this statement; "memory is the common property of all cortical cells and fibres which are able to receive and conduct external stimuli of all sorts." The author shows that memory is a cortical function, and that the number of cortical cells fixes the limits of memory, which he regards the "foundation of all intellectual activity;" that recollection of former experiences implies the association of one phenomenon with some other; that the *fibræ propriæ* of the cortex effect the physiological association of the images which are stored in functionally separated portions, and recollection constitutes a process of induction which is explained by "the induction-mechanism in the brain."

The closing section of this volume upon the nutrition of the brain is particularly instructive and valuable. It first considers the anatomical and physiological conditions affecting the quantity of and change in cerebral blood supply; and, then discusses certain independent cerebral influences resulting from the activity of the brain itself, in their relation to the distribution of blood, and shows that these influences unite with the former conditions in spite of variations of pressure due to peripheral causes, to perfect the nutrition and function of the brain.

BOOKS AND PAMPHLETS RECEIVED.

"The Therapeutical Drinking of Hot Water: Its Origin and Use." By Ephraim Cutter, M. D., New York. New York: W. A. Kellogg, 1883.

"Report of the Board of Trustees of the Michigan Asylum for the Insane for the years 1885–86." By Authority. Lansing: Thorp & Godfrey, 1886.

"Follicular Amygdalitis." By A. Jacobi, M. D., President of the New York Academy of Medicine. Reprinted from the *Medical Record*, November 27, 1886. New York: Trow's Printing and Bookbinding Company, 1886.

"Periostitis." Delivered at the College of Physicians and Surgeons, Chicago, Illinois. By N. Senn, M. D., Milwaukee, Wisconsin, Professor of the Principles and Practice of Surgery and Clinical Surgery. Reported by William Whitford. Reprinted from the *Philadelphia Medical Times* for July 24, 1886.

"Wear and Tear, or Hints for the Overworked." By S. Weir Mitchell, M. D., LL. D. (Harvard), Member of the National Academy of Sciences; President of the College of Physicians of Philadelphia, etc. Fourth edition, thoroughly revised. 12mo: seventy-six pages. Cloth, $1.00. Philadelphia: J. B. Lippincott Company, 1887.

"Researches into the Etiology of Dengue." By J. W. McLaughlin, M. D., of Austin, Texas. Read in the Section on Practical Medicine at the Thirty-Seventh Annual Meeting of the American Medical Association, at Saint Louis, May, 1886. Reprinted from the *Journal of the American Medical Association*, June 10, 1886. Chicago: 1886.

"How We Treat Wounds To-day." A Treatise on the subject of Antiseptic Surgery which can be understood by beginners. By Robert T. Morris, M. D., Late House Surgeon to Bellevue Hospital, New York; Member Linnæan Society of Natural History, New York; Member New York County Medical Society; Consulting Surgeon to the Woman's Hospital of Brooklyn. Second edition. 12mo: one hundred and sixty-five pages. Cloth, $1.00. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1886.

"Pocket Medical Formulary," arranged therapeutically. By Alexander Hazard, M. D., and Bernard M. Goldberg, M. D. Revised and enlarged by Abraham S. Gerhard, A. M., M. D., Professor of General Pathology, Medical Jurisprudence, and Clinical Medicine, at the Medico-Chirurgical College, Philadelphia, Pennsylvania. With an Appendix, containing Formulas and Doses of Hypodermic Medication; a Table of Eruptive Fevers; and Poisons, their Symptoms, Antidotes, and Treatment. Flexible morocco. Three hundred and twelve pages. $2.00. Philadelphia: Collins, Printer, 705 Jayne street, 1886.

"Diseases of Women." A Hand-book for Physicians and Students. By Dr. F. Winckel, Professor of Gynæcology, and Director of the Royal University Clinic for Women in Munich. Authorized Translation by J. H. Williamson, M. D., Resident Physician, Allegheny General Hospital, Allegheny, Pennsylvania. Under the Supervision and with an Introduction by Theophilus Parvin, M. D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. 12mo: six hundred and seventy-four pages. Cloth, $3.00. Philadelphia: P. Blakiston, Son & Company, 1887.

"A Text-Book of Medicine for Students and Practitioners." By Dr. Adolf Strumpell, formerly Professor and Director of the Medical Policlinic at the University of Leipsic. Translated by permission from the Second and Third German Editions by Herman F. Vickery, A. B., M. D., Physician to Out-Patients, Massachusetts General Hospital; Assistant in Clinical Medicine Harvard Medical School; Fellow of the Massachusetts Medical Society, etc.; and Philip Coombs Knapp, A. M., M. D., Professor to Out-Patients with Diseases of the Nervous System, Boston City Hospital; Physician to the Department for Diseases of the Nervous System, Boston Dispensary; Fellow of the Massachusetts Medical Society, etc. With Editorial Notes by Frederick C. Shattuck, A. M., M. D., Visiting Physician to the Massachusetts General Hospital, and to the House of the Good Samaritan; Instructor in the Theory and Practice of Physic, Harvard Medical School; Member of the Association of American Physicians; Fellow of the Massachusetts Medical Society, etc. With one hundred and eleven illustrations. 8mo: nine hundred and eighty-one pages. Cloth. New York: D. Appleton & Company, 1887.

MEDICAL DIGEST.

THE THERAPEUTICS OF NUX VOMICA.

J. H. Musser, M. D., of Philadelphia, recently read before the Philadelphia County Medical Society a paper on this subject:

Nux vomica is eminently of service, according to my experience, in dyspepsia of the atonic variety, with or without depression of spirits, hypochondriasis, headache, weight on the head, and other nervous phenomena. It is in these cases that increasing doses are of value. I believe this good effect to be due not alone to the local irritant effect of the drug, as suggested by Ringer, nor to its tonic influence on the muscle and blood-vessels, but to its systemic effect, whereby reflex excitability of the spinal and vaso-motor centers is increased. Digestion is eminently a reflex process. This is seen from the efforts of mastication, throughout the entire process, to that of defecation. Now, it seems to me that atonic dyspepsia and slow digestion, with the train of morbid symptoms that arise therefrom, are due primarily to torpid nerve centres. They do not respond to the stimulus of food, and hence refuse to send the requisite amount of blood to the glands by virtue of their influence on the vessels, or to stimulate glandular secretion. In fact, this element of diminished reflex excitability may be present, and it seems rational to think so, in all forms of dyspepsia, whether from general debility, the excessive use of indigestible articles of diet, or of stimulants. In these cases it is requisite to get the full effect of the drug. Likewise, in the dyspeptic symptoms that belong to heart-disease, bronchitis, or cirrhosis of the liver, the good effects of Nux vomica are no doubt on account of its tonic effect on the blood-vessels. In gastric catarrh, on the other hand, small doses of the drug should be used to secure its local irritant action. It seems to me the same theory, the increase of reflex excitability, may partially explain the good effect of this drug in constipation.

As a respiratory stimulant the action of this drug is well known. I once ordered it to a young girl in doses of twenty drops, and was surprised to find her father had had the bottle replenished twice for a cough. On the occasion of his third visit he confessed it was the best cough mixture he had ever had. Emphysema and chronic bronchitis were the cause of his cough. Last winter the nux vomica kept at work the entire season and enabled to walk long distances a man who for years previously would lose weeks and weeks each season on account of asthma and emphysema. His "wind" improved wonderfully, and his great boast was his ability to walk home with his fellow-workmen at their gait. I could readily repeat many instances of the value of this drug where respiratory stimulants are indicated.

In mental and physical depression due to prolonged excitement this drug is of value. One of my students took from six to eight hundred drops daily of the tincture, and thereby successfully tided himself over a period of great strain. In fact, he studied harder and kept later hours than at any other examination period, and with less detriment to his health. He is myopic and astigmatic, and this was the first time he came out of his studies without suffering from eye-strain. The doctor writes me that he has used the drug since in practice under similar circumstances. For instance, it helped along well a young society girl, who was unusually busy with engagements until the rush was over. The uses of the drug are as dangerous, however, as the use of any stimulant, and should be given only on extraordinary occasions for the purpose indicated. Its use as above serves to show its power as a nerve-stimulant.

It has recently been the custom of students of medicine to take caffeine to keep them awake for study. My observation of the students who had taken one of these drugs was favorable to the use of nux vomica. The ones who took it came off with much better health and less nervousness than the caffeine-eaters.

Many patients complain of being more tired on rising in the morning than when retiring. This has disappeared frequently on a course of nux vomica. I have also the records of cases of spasms of the œsophagus, of excessive flatulency, of nervous depression, characterized by fear, by ready excitability, by mental lethargy, irritability, etc., and of forms of hysteria—occurring late in life especially—which were improved by this drug.

There are, of course, other well-known uses for this valuable drug which time and space will not permit me to detail. In small and frequently repeated doses it has been recommended to be used, but I confess I have never had any good results from its use in this manner. Ringer recommended it in acute gastric catarrh, with "sick headache" and slight nausea, only in doses of one drop, in water, every five minutes, until eight doses are taken. It may be a mere coincidence, but nevertheless in every instance of a similar character in which I used it, it caused vomiting without any relief.

The following are some of the conclusions which may be drawn from the above statements:

(1) The effects of nux vomica are in inverse proportion to the age of the patient; the susceptibility increases with the age.

(2) The usual doses of the tincture indicated in the textbooks are inadequate for many practical purposes, and do not represent the usual dose of strychnine.

(3) It is a powerful and rather transient stimulant.

(4) The best therapeutical effects can be secured in many cases only by pushing the drug almost to the physiological dose.

(5) The system soon becomes accustomed to its use, and the dose must be increased.

(6) The good effects in dyspepsia are largely due to its power to heighten reflex excitability.

THERAPEUTIC PROGRESS.

TOOTHACHE DROPS.—This solution is much used: Camphor, balsam of Peru, and alcoholic extract of opium, of each one grain, and mastic two grains in chloroform, twenty grains. A pellet of cotton moistened with this liquid is introduced into the cavity of the tooth.

COLLODION OF IODOFORM.—This preparation has been successfully used for the relief of neuralgia and is usually prepared by dissolving one part of iodoform in fifteen parts of collodion. Occasionally ten per cent. or even twenty-five per cent. solutions have been employed.

GALAZYNE.—Dujardin-Beaumetz gives the following formula: Brewer's yeast, four grains; sugar, ten grains; cow's milk, one liter. Dissolve the sugar and yeast in a little water, add to milk and keep securely corked in a cool place. The product contains from one to two per cent. of alcohol.

COCAINE IN CROUP.—Labric praises cocaine as the best remedy for croup. He applies a brush dipped in a five per cent. solution of cocaine to the throat for several seconds: a few drops are allowed to go down to the larynx. The operation is repeated two or three times a day, and nothing but a little black coffee is administered to the patient.

EULYPTOL.—This is a mixture of salicylic acid, six parts; carbolic acid, one part; and oil of eucalyptus, one part, which Dr. Schmeltz believes to be preferable to most other antiseptics. It has a strong aromatic odor, and an acrid burning taste; dissolves readily in alcohol, ether, chloroform, and a mixture of equal parts of alcohol and glycerine,—also in alkalies, but is sparingly soluable in water. Urine to which a small quantity of eulyptol has been added remains unchanged for fully a month.

Boldoglucin.—This glucoside is now administered to the insane for its hypnotic properties. On account of its strong odor it is best administered in gelatin capsules or by means of clysters. In doses of 1.5 to 4.0 grains it produces a decided hypnotic effect, and occasionally cessation of the hallucination, but these as well as sleeplessness return on discontinuing the use of the remedy.

An Anodyne for Dental Caries.—The following mixture is recommended:

℞.	Camphor	5 parts.
	Chloral hydrate	5 parts.
	Cocaine hydrochloride	1 part.

On heating this mixture to the boiling point of water, an oily liquid is formed. This is to be applied lightly, and it is said that after a few applications the pain will surely be alleviated.

Arsenite of Strychnine.—This salt is recommended by Roussell as a substitute for arsenical preparations, especially Fowler's solution. Patients soon become accustomed to the solution and it is apt to produce intoxication, and when used subcutaneously has but little effect. Arsenite of strychnine injected hypodermically produces excellent results and is not painful. The dose to begin with should be small, one-seventy-eighth of a grain. Arsenite of strychnine is a painful antiseptic. In abdominal typhus it produces excellent results. Combined with salicylate of iron it is given in chronic anæmia, dyspepsia, etc.

Drumine.—This is the title of a new Australian local anæsthetic discovered and described by Dr. John Reid, of Port Germain, South Australia. *Euphorbia Drummondii* is the species from the milky juice of which the alkaloid drumine was prepared. Cocaine is known to have a mixed action on sensory and motor nerves, and causes preliminary excitement; while drumine is said to have an almost purely sensory paralyzing effect, and does not cause excitement. Experiments were made on cats and on the observer's tongue. It was injected into the legs of the former animals and caused general dullnesss, with marked impairment apparently of all forms of sensibility. Placed on the tongue, nostrils, and hand of the observer, the resulting anæsthesia was most marked. The alkaloid has no action on the pupil, and small doses given internally produce no constitutional effect. It has been employed successfully in subcutaneous injections for sciatica and sprains. The experimentation has so far been imperfect and incomplete. We hope soon to have a fuller account of this new alkaloid, and to be able to give further information thereon. The amount injected subcutaneously was four minims of a four per cent. solution. Dr. Reid anticipates a brilliant future for the drug in the domain of nervous and cerebral diseases.

URETHANE.—Dr. Andrews has conducted some interesting experiments with this hypnotic. Having first tested the effects of the remedy upon himself, he proceeded to try it in six cases of acute mania, four of paresis, four of melancholia, two of chronic mania, and two of dementia. The results of these experiments were on the whole decidedly favorable; but the author justly observes that before definite conclusions can be arrived at a more extended series of trials is necessary. Irrespective of this fact, however, the results obtained by Andrews are decidedly encouraging. The dose usually employed by him was thirty grains. On two occasions, however, doses of sixty grains were given. The result of these observations goes to show that urethane possesses marked hypnotic properties. Throughout these experiments no unpleasant effects were observed, and there were no phenomena pointing to other than an action affecting the cerebrum. The effects of the drug were felt, so far as Andrews was able to estimate them, within an hour after its administration.

ACUTE MELANCHOLIA CAUSED BY IMPACTED FÆCES.—Dr. Hutchinson has detailed an interesting case of this kind occurring in a married woman of forty. At the time of her admission into the Western Pennsylvania Hospital for the Insane, the patient suffered from acute melancholia, was very weak and extremely emaciated, her skin was bronzed, dry, and harsh, her hair was dry and falling out, and all the secretions of the body were perverted. On examination, distinct tumor could be felt through the abdominal walls, following the course of the rectum and sigmoid flexure and making the introduction of a catheter to relieve the distended bladder almost impossible. The tumor was immediately thought to be an accumulation of hardened fæces. Accordingly, the scope and appropriate injections were employed for several days, with the ultimate result of removing the mass entirely. Rapid improvement in the patient's health, both mental and physical, followed this evacuation, so that in less than one month she was discharged, being then in the enjoyment of perfect health of body and mind alike.

ERGOT IN THE TREATMENT OF DYSENTERY.—Dr. Du Rocher reports the history of a severe case of dysentery in which, after four days of unsuccessful treatment with other remedies, ergot was ordered, forty-five grains a day, in six doses. During the first day's use of the ergot there were only two decidedly diarrhœal passages, containing a little mucus, but not a trace of blood; the next day there was only one; on the third day the patient was cured. The author is inclined to think that ergot will prove a valuable drug in the treatment of dysentery.

A NEW HYPNOTIC.—Dr. Ghillany, pharmacologist to the Vienna General Hospital, has succeeded in preparing an alcoholic extract from the roots of *Piper methysticum* (Kara Kara), which is called "Extractum Kara depuratum." Experiments made with this drug by some physicians of the hospital proved it to be a valuable hypnotic. In all the cases where it was administered, sleep was produced, without any disagreeable consequence; even headache, following generally the exhibition of hypnotics, did not occur. It was given as a powder, from two to five centigrammes being a dose; or as a suppository containing two centigrammes.

THE ACTION OF GRINDELIA ROBUSTA ON THE HEART AND CIRCULATION.—From experiments made under the direction of Professor Botkine, on animals and clinically, with the fluid extract of *Grindelia robusta,* the following conclusions are made: The drug diminishes the number of the heart-beats and increases the blood-pressure in the vessels. The effect is produced by excitation of the moderator of the heart, particularly at its center of origin in the medulla oblongata. The increase of the blood-pressure is in part due to the action of the drug on the walls of the blood-vessels themselves, and in part to the excitation of the vaso-constrictor centers in the cord, medulla, and brain. The excitability of the various nervous or musculo-nervous systems of the heart and vessels is sensibly diminished under the influence of the drug. Diminished excitability is equally noticed in the motor nerves and voluntary muscles. The nerve-centers are sooner influenced than the peripheral nerves, and these sooner than the muscles.

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ORIGINAL ARTICLES.

NOTE ON SOME USES OF THE OIL OF ERIGERON.

BY ROBERTS BARTHOLOW, M. D., LL. D., PHILADELPHIA, PENNSYLVANIA.
Professor of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia, etc.

The oil of erigeron has not been much employed as a medicine at any period, and of late years, hardly at all. A quarter of a century ago its value as a remedy for certain kinds of hæmorrhage was known to a few physicians of Philadelphia, but that fact never obtained general recognition. An accident led me to the discovery—if I may venture to use so imposing a term—of its remedial virtues in certain affections of the genito-urinary tract, and to these observations I now briefly call attention.

That oil of erigeron is entitled to the repute it had at one time as a remedy for certain kinds of hæmorrhage, I am well assured by recent experiences. Sometime since casting about for a remedy in a case of metrorrhagia that had severely tried my resources, I fell on erigeron oil but with a rather despairing sense of its probable inutility. I was proportionally pleased to find that it acted admirably. As one case can no more establish the value of a remedy, than one swallow can make a summer, I have since made numerous observations with the view to ascertain its real powers. I am accordingly in a position to re-affirm the statements formerly made, and to express my belief that in oil of erigeron we have a valuable remedy for certain cases of menorrhagia and metrorrhagia and, probably, passive hæmorrhages in general. In some cases of *neurasthenia,* it now and then happens that menorrhagia becomes an embarrassing complication; but I have found erigeron oil to act very efficiently, and whilst it has moderated the flow to proper dimension, has improved the general condition and lessened the nervous irritability.

For the most part the uses of oil of erigeron for the conditions above mentioned, are not novel. Finding, however, that it is a really effective remedy in menorrhagia and metrorrhagia, I then had recourse to it in these conditions having their origin in albuminuria, and then it was I ascertained that it checked remarkably the waste of albumen. From this point it was but a step to observe how far this remedy affects the course of Bright's disease—or such chronic forms of albuminuria as are due to tubal and interstitial nephritis and the cases combining these two morbid processes. No attempt was made to arrive at an exact differentiation, if indeed such be possible. It suffices to state that the chronic cases of nephritis united by the common symptom—albuminuria were included. In the chronic form of Bright's diseases, erigeron oil lessons the amount of albumen, lowers the abnormal vascular tension, and improves the general condition. It has also seemed to have a most favorable action on the headache, the nausea and other symptoms of uræmic character. Whether it be actually curative in cases not too far advanced, can be determined only by careful and sufficiently protracted trials. Thus far it can be said to promise well.

Oil of erigeron also acts in a very beneficial manner in cystitis, lessening the irritability of the bladder, and diminishing the catarrh. In a case of prostatic disease with very great irritability of the bladder and much catarrh, it seemed to have an excellent effect.

In catarrh of the bronchial tubes, chronic bronchitis, and in cough of a nervous character I have seen very considerable relief given by it. Indeed, in these affections it has seemed to me to afford as much relief as *terebene* which has been much vaunted of late, and with justice.

In administering it, I have usually directed it in five drop doses every three or four hours. It may be conveniently exhibited dropped on a lump of sugar. It appears to me to do better in moderate doses rather frequently administered so as to maintain a constant impression, than in occasional larger quantity.

Besides the foregoing practical experiences it may be mentioned that oil of erigeron is an antiseptic and in this capacity may prove useful. But if it have no other practical applications than those suggested by my own experiences, it will deserve a prominent position as a remedy.

I learn from Professor Lloyd of Cincinnati, to whom I am indebted for specimens of the pure oil, that erigeron oil is much adulterated and that probably no really pure article is to be found in the market. It appears to be adulterated to some extent, according to Professor Lloyd, with *oil of erechthites* (fireweed), but this apparently has similar properties, and well deserves investigation, which I intend to give it presently, to the extent its utility may warrant. Meanwhile I venture to hope that those members of the profession interested in our indigenous materia medica will make trial of the erigeron and report the results.

ACUTE PUERPERAL MANIA: RECOVERY.

BY P. E. NAGLE, M. D., BILLINGS, MISSOURI.

On January 25, 1886, I was sent for in haste to see Mrs. E. I was not at home at the time, but returned a few minutes afterward and went to see the patient. Her friends had been too much alarmed to await my arrival and had sent for another doctor who, I found, was already in attendance. I noticed that the patient was very much excited, very talkative, and that she insisted on keeping her head under the clothes. Her face was flushed, pulse full, but not very rapid, and her temperature 101.5° Fahrenheit. Her tongue was slightly coated and tremulous. As I did not consider the case mine, I immediately departed, having suggested to the doctor that bromide of potassium in large doses might prove beneficial. He had already given her an opiate and tincture of gelsemium. In the afternoon, I was again sent for and found the patient much more excited, in fact, force and persuasion were necessary to keep her in bed. I had not time to give her a dose of chloral and bromide before she overcame all resistance and made for the door, slightly wounding herself on a hot stove, and, in the struggle, biting two of the assistants. I immediately administered chloroform, and as soon as she was under its influence she was again put to bed. She slept quietly for sometime after the effects of the chloroform had passed off, and when she awoke she begged for more chloroform, which was sparingly given.

The patient was a stout, healthy looking, well-formed woman, twenty-two years old. Her parents are both living, and there is no hereditary taint. Seven days before she had given birth to her first child, a healthy, vigorous boy. Her labor was not unusually long or severe, but the doctor who attended her in her labor was called away, and as he did not return in time, another doctor had to be sent for. This was the only untoward occurrence during her labor. I am not at all prepared to say that it had a particle of influence in the causation of her disease. The lochia had ceased, but none of the attendants knew when. Injections of glycerine and carbolic acid in warm water were made three times a day when she could be controlled.

The patient continued very restless and violent for the first month, at times refusing both medicines and nourishment. She was at times moody and silent, at other times boisterous and quarrelsome. The discharges were passed in the bed, and only very rarely would she ask to be assisted to the commode. She had that peculiar immobility of expression which is so distressing to look upon and so extremely difficult to describe accurately.

The line of treatment adopted from the first was to give the patient plenty of nourishment, and, if possible, to keep her quiet and secure sleep. No physical restraint of any kind was used except on three occasions, and then only for a few hours. To secure rest a host of remedies were used in succession, not with a view to experiment, but simply from necessity, because the medicines after a few weeks' use seemed to lose their effect. As an instance, chloroform, which acted almost magically the first week, in securing sleep, and which was ardently desired by the patient, in the third week, was utterly powerless, in double the dose, and the patient was so averse to its use, that it was discontinued. Bromide of potassium, chloral hydrate, hyoscyamus, and cannabis indica had a very good effect, but the hypodermic injection of morphia secured the largest and the quietest sleep. Morphia and chloral combined and administered by the mouth were also very efficacious. When the patient became furious in the night, and could not be persuaded to take any medicine, enema of sulphuric ether had generally a good effect.

Dr. Gregg, of Verona, Dr. W. H. Meaks, of Maricnville, and Dr. McCord, of this place, saw the patient with me in consultation. Each of these gentlemen made valuable suggestions, which were faithfully carried out. I had charge of the patient and visited her daily from the 25th of January to the 12th of March. On the 15th of the latter month she drank an ounce and a half of the compound tincture of iodine. I was immediately summoned and gave copious draughts of starch water followed by emetics. She said she did not know what she was doing, and did not intend to kill herself. She has not made any more attempts on her life and is to-day, to all appearances, perfectly healthy both in mind and body.

CLINICAL LECTURES.

CONTAGIOUS DISEASES OF CHILDHOOD.

BY FRANK E. WAXHAM, M. D., CHICAGO, ILLINOIS.
Professor of Diseases of Children in the College of Physicians and Surgeons, Chicago, Illinois.

ROTHELN OR GERMAN MEASLES.

This is a mild contagious disease characterized by an eruption which appears, usually, without premonitory symptoms, and is not followed by desquamation. It is a rare disease in this country; I believe I have only seen one or two epidemics of it. However, in Europe, especially in eastern Europe, it is of more common occurrence. The initial stage is frequently wanting in this malady. The child is frequently found at school or at play with the characteristic eruption upon it, yet in some cases we will have frequent premonitory symptoms lasting for a few hours, such as pain in the head, the back, the bones, chilliness, and languor. These manifestations do not usually last over twelve hours. In some cases we get slight catarrhal symptoms, yet they are not as characteristically marked as in a case of ordinary measles. The eruption, like that of measles, appears first, upon the forehead, then about the ears and neck, and afterwards extending to the whole surface of the body. It appears in the form of small papules, smaller than those of measles or rubeola. It, perhaps, resembles somewhat the eruption of scarlet fever. You would say it varies between that of measles and scarlet fever; it is a little coarser than the eruption of scarlet fever; the pulse is accelerated only to a slight degree, perhaps not ranging over 90 or 100; the temperature scarcely elevated, not over 100°; sometimes it may reach 101°. All these symptoms last but a day or so, the child experiencing no inconvenience whatever, and would be able to play if it were permitted. Occasionally there is vomiting, but this is not a common symptom; it retains its maximum for about two or three days. It disappears without desquamation. There are no complications observed in a case of German measles. The prognosis is always favorable. All that is required is simply to place the child in bed for a day or two, make the diet light, and nurse it.

VARICELLA.

Let me now invite your attention to *varicella*, *chicken-pox* or *swine-pox.* It is the mildest of the eruptive diseases. It is characterized by a peculiar eruption that makes its appearance at the termination of the first day, these papules terminating in vesicles. The premonitory symptoms are usually slight; there may be some febrile action; the skin may be hot for a few hours. Occasionally there is vomiting; there may be a slight elevation of temperature, and this febrile attack may last for twelve hours, preceding the eruption, and may continue for twenty-four hours after the appearance of the eruption. Oftentimes the eruption appears without those symptoms; it is first seen upon the body, and then it spreads to the face and to the extremities, first occurring in the form of minute papules. About the second day vesiculation occurs simultaneously over the whole body, which is characteristic of the disease. About the third day the eruption reaches its maximum, and the vesicles contain a clear, transparent fluid. About the fourth day this fluid is absorbed, and desiccation or drying of the scales occurs; a light, thin scale or scab appears over the seat of the vesicle, and occasionally a cicatrix results, not always. The vesicles vary in size from a line to two or three lines; some of them will be small and pointed, while others will be larger, circular and oblong in shape. The febrile action does not continue during the whole course of the disease, but disappears about thirty-four or thirty-six hours after the appearance of the eruption.

The prognosis in a case of varicella is always favorable. It is a disease unattended by danger.

In reference to the diagnosis, the only disease that we will have to exclude will be variola or varioloid. Variola or varioloid may be mistaken for varicella, or varicella may be mistaken for other eruptive diseases. How will we make our diagnosis? In varioloid or variola there will be initial symptoms, more marked than in a case of varicella. The febrile action will be higher; the pulse more rapid; the temperature elevated; vomiting is a common symptom. With the appearance of the eruption in these diseases there is a subsidence of the febrile action; there is a difference also in the appearance of the eruption. In varicella the eruption appears upon the body, and then upon the face and extremities. In varioloid or variola it appears upon the forehead, then upon the hands and extremeties, and later upon the body. The eruption presents a different appearance in the early stage of variola or varioloid. We have papules, to be sure, but they are more deeply-seated; and in varioloid or variola we have first the papules, then the vesicles, and later pustules, three stages which the eruption passes through, but not so in varicella. We first have the papule, then quickly followed by the vesicle, and the vesicle desiccates without pustulation. Again, in variola or varioloid there is an indurated base to the vesicle; not so in a case of varicella. In varicella we may get a minute zone of redness about the vesicle; we do not get that indurated condition of the base seen in variola or varioloid.

Varicella requires little treatment; during the febrile action we may give some febrifuge containing, perhaps, sweet spirits of nitre, aconite, and camphorated tincture of opium with a little water to control the restlessness; or, if the child is restless and sleepless at night, we may give an occasional dose of some one of the bromides. This will be all the treatment indicated.

PAROTITIS.

I shall now speak of parotitis, an acute, contagious disease. It is oftentimes not preceded by premonitory symptoms. In many cases the first symptom will be soreness at the angle of the jaw and slight swelling of the parotid, but there will be little or no febrile action. The swelling of this disease occurs just below the lobe of the ear, pushing the lower lobe upwards, and the swelling extending on to the cheek as well, and on account of this swelling about the angle of the jaw mastication, or any movement of the jaw, causes pain. The swelling reaches its height usually in about three or four days, then remains stationary and gradually subsides, so that by the sixth, or at most, the tenth day, it has disappeared. Mumps usually occurs first upon one side (as a rule, the left). The parotid gland is the seat of the malady, then within from one to three days the opposite gland becomes inflammed. If only one gland is affected, then the other may be the seat of a subsequent attack. Occasionally the swelling disappears and metastasis occurs (in the male) in the testes, the epididymis or tunica vaginalis; while in the female it may be found in the labia majora, ovaries or mammæ. Sometimes metastasis may occur without the subsidence of the swelling of the parotid gland.

The disease can scarcely be mistaken for any other, for it pushes the lower lobe of the ear upwards; it projects upon the cheek; it is different from a swelling of the lymphatic or cervical glands; it is not so hard, indurated and unyielding. We may have a swelling of the lymphatic gland in diphtheria, which may closely resemble a swelling of the parotid gland in mumps, but if you inspect the throat you will find the diphtheritic membrane characteristic of diphtheria. In a case of uncomplicated parotitis the pharynx remains natural; there is no inflammation or swelling of the tonsils. Sometimes we may have a swelling of the lymphatic gland from a decayed molar tooth, but inspection of the mouth will help you in your diagnosis.

The prognosis is always favorable; it is simply a disease unattended by danger.

The treatment will consist of some diaphoretic mixture, using an opiate to control the pain, allowing the patient a little rest, local applications, etc. Usually oil will be sufficient, frequently applied to the swollen gland and covered with cotton or wool, or we may use flannels saturated with sweet or camphorated oil and apply it directly over the swollen and inflamed gland. It is well to protect the gland by means of cotton batting or a pad of some kind; in some cases it is prudent to apply some slight counter-irritant, as camphorated oil; we may give occasionally a Dover's powder, especially if pain is present, to give the child rest. If metastasis occurs, this would be treated accordingly; warm poultices should be applied, and a very good application will be the following: Take of aconite leaves, one ounce; muriate of ammonia, one ounce. Place this mixture in a quart of water and steep it for ten or fifteen minutes, make a tea, then make a poultice of flaxseed meal, using this tea to make the poultices instead of water. This tea should be made hot and incorporated with the flaxseed, then it should be applied to the swollen portion. This, I think, will be all the treatment indicated in this disease.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

OVARIOTOMY IN RUSSIA.

According to Matwew ("Dissertation," Saint Petersburg, 1886), since 1848 the number of ovariotomies performed in Russia is six hundred and ninety-six, of which the first successful result was obtained in 1862. The operations are divided among ninety-six operators, of course very unequally. Nearly three-fourths of the cases belong to the university towns (Saint

Petersburg, two hundred and ninety-four; Moscow, one hundred and ten; Kiew, fifty-nine; Warsaw, fifty-two; Kasan, twenty-eight; Dorpat, twenty-five; Helsingfors, four); of the remaining cases the greater part belong to the hospital of a manufactory in eastern Russia (Nischnie-Tagel, in the government of Perm, forty-six cases), and Tambow, sixteen cases. The number of deaths following the operation is two hundred and thirteen (thirty-two per cent.), of course becoming constantly less with the development of antiseptic surgery. Sixteen times ovariotomy was performed on pregnant women; two times death followed, six times abortion. Twice the operation was repeated on the same woman, once with a fatal result. Cause of death in more than half the cases (one hundred and thirty-three), peritonitis in various forms. The astonishing difference in the per cent. of fatal cases for the different operators (Krassowsky, forty-two per cent., Lazarewitsch, forty-one and nine-tenths per cent., down to Rein, seven and seven-tenths per cent.), is due among other things to local circumstances and the time when the operation was performed, whether before or after antiseptics. —*Centralblatt fur die gesammte Medicin,* Number XL, page 657, 1886.

ON SUBCUTANEOUS INJECTION OF CHEMICALLY PURE CARBOLIC ACID IN TUBERCULOSIS OF THE LUNGS.

In the Society of Practicing Physicians, Dr. Filleau spoke of the various drugs that have been used in pulmonary consumption and recommended carbolic acid subcutaneously or by the stomach. For subcutaneous use, which method Dr. Filleau much prefers, a solution of one to one hundred injected "in loco dolent" is employed once daily. From these injections neither abscesses nor phlegmonous appearances, not even nodules are said to result. By the mouth Dr. Filleau recommends a solution of 2.0 grammes of carbolic acid in four hundred grammes of the purest neutral glycerine; a tablespoonful of this mixture will consequently contain 0.015 gramme of carbolic acid; of this solution one to four tablespoonfuls can be prescribed daily without disturbing the digestion. The usual symptoms of poisoning by carbolic acid, such as brownish black urine, dizziness, vomiting, general trembling do not come on suddenly, but appear gradually and the medicament can be discontinued at any time.

Dr. Filleau, as the result of his experience, has come to the following conclusions:

(1) Granting the parasitic nature of tuberculosis, we are justified in relying on carbolic acid as the best antiseptic to meet the indications of the disease.

(2) Carbolic acid is the only remedy known up to the present time, which could be employed subcutaneously in large and long continued doses without disadvantages.

(3) That chemically pure carbolic acid can be used subcutaneously without danger or unpleasant after-effects numerous trials have proved beyond a doubt.

(4) Under the influence of this method of treatment the general condition of the tuberculous patient can be rapidly improved and the local affection also can be influenced for the better.

This method of treatment requires perseverance on the part of the physician as well as on the part of the patient.—*Jahrbuch fur Kinderheilkunde,* Band XXV, Heft I and II, page 135, 1886.

ON THE USE OF SALICYLATE OF LITHIUM IN CHRONIC RHEUMATIC AFFECTIONS.

At the session of the Académie de Médicine on December 8, 1885, Professor Vulpian spoke on the use of salicylate of lithium. While salicylate of soda in acute articular rheumatism and in gouty affections is of the greatest service, in the subacute and chronic form of articular rheumatism and in gonorrhœal rheumatic affections it is usually wholly without effect. As soon as the acute form of articular rheumatism passes into the chronic form Professor Vulpian gives the salicylate of lithium in doses of four to five grammes daily with the best results. If too large a dose is used the salt acts as a laxative and produces griping and perhaps temporary dullness of hearing.—*Jahrbuch fur Kinderheilkunde,* Band XXV, Heft I and II, page 137, 1886.

THE VALUE OF ANTIPYRINE IN DISEASES OF CHILDREN.

In an article showing much diligent labor, Dr. Laure, physician at the Charité in Lyons, gives an account of fifteen carefully observed cases treated with antipyrine (seven children with typhoid fever, general miliary tubercle, two children, acute articular rheumatism, one child, and one case of scarlet fever complicated with diphtheria, croupous pneumonia and chronic tuberculosis of the lungs, one case). The paper is accompanied by numerous charts showing temperature curves. Dr. Laure has obtained the following results: In typhoid fever, pneumonia, the hectic fever of tuberculosis, in scarlatina and articular rheumatism in the years of childhood, antipyrine stands above quinine. Its rapidity of action and the influence on the fever curve are of especial value in early years.

When there is profuse secretion of sweat and scarcity of urine the remedy must be temporarily discontinued.—*Jahrbuch fur Kinderheilkunde,* Band XXV, Heft I and II, page 139, 1886.

TREATMENT OF ACUTE OTALGIA WITH CARBOLIZED GLYCERINE.

For acute earache dependent on catarrhal affection or simple neuralgia of the drum membrane, Dr. Bendelack Hewetson (*Bulletin général de thérapeutique,* April 15, 1885) recommends dropping into the ear lukewarm carbolized glycerine. If the external auditory meatus is swollen and partially occluded the glycerine may be brought to the painful part through a fine gum elastic catheter.—*Jahrbuch fur Kinderheilkunde,* Band XXV, Heft I and II, page 142.

THE FOOD FOR INFANTS.

Physicians have long held that infants during the first six months should receive no kind of soup, pap or other preparations of flour whatever they may be named. Carefully produced and properly treated cow's milk ought and must form the principal and regular article of food.

The question becomes more difficult at the time of weaning or in instances where it becomes necessary to give up temporarily or permanently the use of cow's milk. Often the physician now leaves the further feeding of the child under the direction of well meaning women from which much harm may result to the young individual.

The physiological relation between nitrogen containing food stuff and carbohydrates, of all grains is most nearly represented by oatmeal; it is further valuable for the large per cent. of fats, salts and dextrin which it contains. According to Payen one hundred parts of oatmeal should yield:

Proteids	14.39
Carbohydrates	75.34
(Of which dextrin	9.25)
Fats	5.50
Salts	3.25

For this reason oatmeal is to be recommended as the best food to take the place of cow's milk.

Unfortunately adulteration of oatmeal is very common. Payen, among thirty samples of oatmeal, found sixteen adulterated.—*Jahrbuch fur Kinderheilkunde*, Band XXV, Heft I and II, page 142, 1886.

QUINTUPLETS (FIVE CHILDREN AT A SINGLE BIRTH).

Dr. Poliakoff, in *Journal de Médicine de Paris*, of January 24, 1886, relates a case of quintuplets. Of the five fœtuses two presented by the breech, three by the head. They came into the world at intervals of five minutes. Each fœtus had quite a perfect amnion. The first child a monster was born dead; the remaining four lived but died soon after. There was a single placenta which weighed five hundred and eighty-five grammes. Only one chorion was present. The umbilical cord sprang from near the circumference of the placenta.—*Jahrbuch fur Kinderheilkunde*, Band XXV, Heft I and II, page 135, 1886.

THE PHYSIOLOGICAL AND THERAPEUTIC EFFECTS OF WATER AT DIFFERENT TEMPERATURES APPLIED TO OBSTETRIC AND GYNÆCOLOGICAL PRACTICE.

The greater effectiveness of hot water as compared with cold water in uterine hæmorrhage has heretofore been observed only clinically. The effect is said to depend on its action on the non-striated muscular fibres which are made to contract and on the blood-vessels which are caused to shrink. The latter assumption is based on the fact that hæmorrhage from the surface of wounds in plastic operations is arrested by the application of water. Emmet thinks that the application of cold causes at first contraction, afterwards dilatation; that hot, on the contrary, causes at first dilatation but after longer continued application, lasting contraction. Milne Murray has attempted to decide this question by experiments on rabbits.

I.—The physiological effects of thermic stimulation on the non-striated muscles.—The vagina and uterus of rabbits and probably of other animals are the seat of regular rhythmical movements composed of periods of contraction and quicker or slower relaxation.

Upon a single application of a stream of water of 60° Fahrenheit (15.5° centigrade) the effects become manifest in from forty to sixty seconds. The contraction which reaches its height in a longer or shorter time is followed by relaxation which is completed in a period three times as long. By repeated application of the stream the excitability of the uterine muscles is rapidly exhausted. On the other hand, already on the single application of hot water of 100° Fahrenheit (37.7° centigrade) contractions set in and reach their maximum in twenty-five seconds; the relaxation on the contrary is completed slowly and interrupted by smaller contraction waves. This action is so increased by repetition that hardly a pause occurs between the relaxation and the new beginning contraction. The water acts most energetically when the temperature is between 110° and 120° Fahrenheit (43.3° to 48.8° centigrade). Upon the vessels the effect of hot and cold water is that they contract making the organ in question bloodless, while water at 70° to 103° Fahrenheit (21.1° to 39.4° centigrade) causes the vessels to dilate and thus increase the hæmorrhage. The observation that after the application of cold water the paleness of the organ soon disappears teaches us that the influence of the same is more temporary than that of hot water.

From these experiments is to be deducted: (1) Water at 110° to 120° Fahrenheit (43.3° to 48.8° centigrade) narrows the blood-vessels and stops hæmorrhage from the smaller arteries. (2) Water between 60° and 100° Fahrenheit (15.5° and 37.7° centigrade) causes dilatation of the vessels and conduces to hæmorrhage. (3) Water below this temperature stops bleeding by contracting the vessels, but only temporarily. (4) After cold water has exhausted its styptic action, hot water is still effective.

II.—Therapeutic application.—(1) In inflammatory processes we have a powerful agent in water at 120° Fahrenheit (48.8° centigrade), influencing by its means the circulation. By it the blood-vessels are contracted, thus hindering the abnormal determination of blood (in many cases the above temperature can hardly be born by patients).

(2) The application of hot water tends to bring the uterus to contraction (*a*) for the purpose of removing blood clots or the afterbirth of a miscarriage; (*b*) in debilitated and hæmorrhagic conditions after emptying the pregnant uterus. Hot water here has the following advantages: (*a*) Rapidity of action. (*b*) Persistence of the same. (*c*) Absence of all injurious reactions. (*d*) Non-liability to exhaust the uterine muscles. (*e*) Addition of warmth to the whole system when abstraction of heat would act injuriously.

(3) Application for the arrest of hæmorrhage in the regions of the body. By analogy of arresting hæmorrhage in plastic operations on the female genitalia, hot water may also be tried for the same purpose in other plastic operations, for example, about the face. Perhaps the speedy drinking of hot water in hæmoptysis is to be preferred to the application of ice or the administration of mineral or vegetable astringents.—*Schmidt's Yahrbucher*, Band CCXIII, Number I, page 51, 1887.

ON THE ETIOLOGY AND CURABILITY OF PERNICIOUS ANÆMIA.

In thirteen cases presenting the symptoms of pernicious anæmia Reyher (*Deutsches Arch. f. Klin. Med.*, Band XXXIX, Heft I and II) observed that this condition was connected with the presence of bothriocephalus latus (broad tapeworm) in the digestive canal, and cure of the pernicious anæmia only followed after removal of the tapeworm, which was probably the cause of the disease, at least indirectly by its presence inducing the malady.

One of these patients even took sick three times in the course of five years with the same symptoms from the same cause and was each time speedily cured after the tapeworm was removed. In a part of these cases the host lodged not only one but several examples of this parasite. Examination of the blood showed disturbance of the rouleau forming property, diminution of the number of blood corpuscles, change of form in the red discs.

Nearly all the patients suffered more or less from impairment of vision; haziness of the retina was noticed in some cases, in others distinct hæmorrhages or the remains of earlier occurring capillary apoplexies in the stage of healing were seen.—*Centralblatt fur die gesammte Medicin*, Number XL, page 701, 1886.

SIX CASES OF ACUTE INTERNAL OCCLUSION OF THE INTESTINE TREATED BY OPERATION.

O. Stelzner, in *Yahresbericht der Geselschaft fur Natur und Heilkunde zu Dresden*, 1885 and 1886, describes six cases observed in the City Hospital at Dresden, in which an internal occlusion of the intestine was operated upon and a radical cure obtained in four of the patients. Stelzner speaks of the inadequateness of our means of diagnosis, and shows the incompleteness of our therapeutic methods. He insists upon high injection as well as washing out the stomach, as measures which should always be tried before laparotomy is resorted to. The operative treatment may be symptomatic or radical. To the first are counted puncture of the distended intestine and the formation of an intestinal fistula; to the latter, the complete removal of the stenosis. Of the six cases, four belonged to the category in which the cause of the occlusion could only be diagnosed after the laparotomy, but was then removed. The cases are the following:

(1) A man, aged fifty-four years. Vomiting and tympanitis. Injection per rectum and washing out the stomach without result. Twelve days after the beginning of the sickness, laparotomy. Invagination of the small intestine found. It was unfolded by slight traction on the upper portion. When fully unfolded the intestine is suddenly torn near the upper part of the seat of invagination, and thin intestinal contents are discharged. The seat of rupture is cut around, and the opening closed by several of Lembert's sutures. Recovery without fever. Completely healed eighteen days after the operation.

(2) A teamster, aged twenty-six. Suffered for years with inguinal hernia on left side. One morning while applying the truss the hernia suddenly slips back. Symptoms of intestinal occlusion. Incision through the hernial sac. Poupart's ligament divided. Cause of the occlusion, two tense bands constrict off a dark-blue colored loop of intestine, together with its mesentery. Division of these bands. Smooth recovery. Completely healed four weeks after the operation.

(3) A woman, aged thirty-seven. Symptoms of intestinal stenosis suddenly appear. Stomach washed out without effect. Two days after taking sick, laparotomy. Cause of occlusion, a tightly stretched cord by which a convolution of intestine one millimetre long was constricted. The intestine was gangrenous. Death on the day after the operation.

(4) Servant girl, aged twenty-nine years. Severe symptoms of incarceration, but no collapse. Laparotomy. Cause of occlusion, a tense band the size of binding cord tightly constricts the lower part of the ileum. Division of the band. Complete recovery without fever in twenty-eight days.

To the second category belong two cases in which neither before nor after the laparotomy, nor at the postmortem, could the cause of the obstruction be found.

(5) A woman, aged thirty-eight years. Suddenly taken sick, Symptoms of acute incarceration eight days before being taken in charge. At time of examination, collapse; severe pain in

abdomen. Passage of loose stools. Bowels moved on the following day. At the same time there is great tympanitis, restlessness, etc.; therefore, enterotomy.

February 12, 1886: An abatement of the severe symptoms. From the intestinal fistula a large ascaris passes. Gradual improvement. Intestinal fistula was successfully united May 4.

(6) A woman, aged twenty-nine. Sudden feeling of pain in abdomen November 24, 1885. Tympanitis, vomiting, collapse. Laparotomy. A certain cause for these symptoms could not be discovered, even at the postmortem.

On account of these favorable results, Stelzner advises early laparotomy or the making of a temporary intestinal fistula.—*Centralblatt fur die gesammte Medicin*, Number XL, page 677, 1886.

GASTROTOMY ON ACCOUNT OF FOREIGN BODIES.

B. Crede describes an operation on a man aged twenty-four years, who in the night while asleep swallowed a large, hard rubber plate with eight artificial teeth of the upper jaw; awaking as they were lodged in the pharynx, in his excitement of impending suffocation he pushed them down still further, since which he felt penetrating pains on pressure; later, nausea and great loss of strength occurred. On the fifteenth day after the accident, Crede performed laparotomy and extracted the plate of artificial teeth, which was lying tightly lodged against the pylorus. The stomach was closed by three rows of sutures (Etagennähte) and dropped back. Healing followed without any reaction whatever. The patient could leave his bed on the fifteenth day after the operation, and on the twenty-first day he left the institution, but with the loss of his affianced, who declared she would not marry such a man.

In connection with this favorably terminating and highly instructive case, Crede gives two tables of cases collected by his assistant, Koch. Some cases not before known are included in these tables, and several errors corrected, such as counting one and the same case several times in the same statistics, the mistake being made by recording the same case from different citations.

The first table includes ten cases in which the stomach was intact and not bound down to the abdominal walls. Of these ten cases eight were healed, although four belong to pre-antiseptic times. For this reason, in cases of foreign bodies in the stomach, the nature of which is such as to render their spontaneous passage out of the body improbable, we should not defer gastrotomy too long, that is, till the bodily strength of the patient is visibly sinking.

The second table consists of nine cases in which adhesions between the stomach and walls of the abdomen existed, and in part of which cases abscesses already were forming. In these cases there remained a temporary gastric fistula after the operation. In eight cases healing followed; in one there was a lethal termination.

In seven other cases no particulars could be learned, hence they are but briefly mentioned.

Concerning the nature of the foreign bodies, there were removed eight forks, five knives, two spoons, one broken-off sword-blade, one catheter, one broken-off coin catcher, one copper wire, one elm twig, two leaden bars, two dermoid tumors, two plates of artificial teeth.

Of the twenty-six cases, twenty-one were cured and five died. —*Centralblatt fur die gesammte Medicin*, Number XL, page 689, 1886.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY WILMOT F. MILLER, CLINICAL CLERK.

PAROTID TUMOR.

Jacob K., Monroe, Michigan; aged sixteen; farmer. Admitted February 2, 1887.

History.—Family history good. Three years ago he first noticed a small hard lump, about the size of a pea in the right side of his neck, below the lobe of the ear. The mass gradually increased in size, but occasioning no pain it was not disturbed for two years. One year ago a physician of Toledo, Ohio, was consulted about it, who diagnosed it a "cancer" and "contracted" to take it away. A number of plasters were applied which destroyed considerable tissue, but did not remove all the growth. The patient became tired of the process and the plasters were discontinued. Since then it has gradually increased in size.

Present Condition.—General health good. A hard dense mass about the shape and size of a hen's egg presents just below the right ear, and to some extent involves the lobe of the ear. The lower part of the tumor is freely movable but the upper is fixed. The limits of the tumor are clear and well defined. The integument covering the tumor is discolored and cicatricial in character. There has never been any pain in the tumor.

February 4: Patient examined in clinic by Professor Maclean, who regarded it a very favorable case for operation. Patient given chloroform and tumor removed, several small arteries requiring the ligature. Dressed with oiled silk and bichloride gauze.

February 5: Slight accumulation of fluid. Drainage tube inserted in the lower portion of the wound.

February 14: Temperature 105°; pulse 120.

February 15: 9 A. M.—Temperature 104.3°; at 7 P. M., temperature 98.3°.

February 21: Temperature normal. Slight discharge. Wound nearly healed.

February 23: Wound healed. Dismissed cured.

PAROTID TUMOR: OPERATION.

Victor N., Bethany, Missouri, aged seven. Admitted to hospital November 9, 1886.

Family History.—On father's side history is good, but on the mother's there is a strumous tendency.

Personal History.—About one year ago he noticed a lump on the right side of his neck, below the level of the angle of the jaw. The tumor has continuously and rapidly increased in size. There has never been any pain associated with or in the growth.

Present Condition..—General health good. A large smooth tumor presents on the right side of the neck. It is limited anteriorly at a point about mid-way between the angle and symphysis of the lower jaw, extending backwards to the mastoid process. It fades off above into the temporal region and reaches down to the level of the clavicle. The tumor is solid and firmly bound down by the deep cervical fascia, but appears to be free from the deep structures of the neck. The trachea is drawn toward the right side.

November 11: Clinic.—Examined before the class by Professor Maclean, who believed it to be an adenoid growth. The tumor is hard, smooth, and regular in outline, and its edges well defined. As it does not seem to involve the important deep structure of the neck it must be regarded a case favorable for operation. The patient being placed under the influence of chloroform, an incision over three inches in length was made over the tumor and through the sterno-cleido-mastoid muscle which was spread out over the growth. The surrounding tissues were freed from the tumor by stripping them up with the finger, and was rapidly accomplished until the under portion of the tumor was reached, where the tissue of the growth blended with the sheath of the large blood-vessels. At this point it required a very careful dissection to free the tumor without injuring the internal jugular vein and common carotid artery. When this large mass was taken away a smaller tumor, the size of a hen's egg, and a number of enlarged glands were exposed; these were in turn removed. The great vessels with the pneumogastric nerve were exposed to the extent of several inches, the common sheath having been dissected away. The amount of hæmorrhage was exceedingly small, there being no blood-vessels of any size divided, but a branch of the spinal accessory nerve and several small branches of the cervical plexus were torn. The wound was washed with bichloride solution (one to two thousand), a rubber drainage tube placed in the cavity, and the wound closed with carbolized silk sutures, excepting at the most dependent part where the tube projected, and dressed antiseptically.

November 16: The sutures were removed this morning, and the patient shown at clinic in the afternoon.

November 22: The wound practically healed and patient permitted to return home.

NOTE.—The temperature never rose above the normal; highest pulse, 92.

TUMOR OF PAROTID GLAND: ENTIRE GLAND REMOVED: RECOVERY.

John H., Thamesville, Ontario; aged twenty-eight; carpenter. Admitted November 23, 1886.

History.—Family history good. Five years ago he noticed a small hard lump below his right ear. Its growth was slow and gave the patient no discomfort until May, 1885, when it became the seat of severe, sharp, darting pain, on account of which he had it removed by Dr. Smith, of Chicago. One month after the operation he noticed a bunch in the cicatrix, which grew very rapidly, attaining nearly its present size in six months. At intervals he has a sharp darting pain in the tumor at night, which is aggravated after exposure.

Present Condition.—General health good. The right side of his face and neck presents a large tumor. Its base extends from the zygomatic arch downwards below the angle of the jaw, and encroaches forward on the face, and extends posteriorly to the mastoid process. It involves the lobe of the ear, and has pushed it outward several inches from its normal position. The mass is firm and hard, and has a very marked nodulated appearance. The integument covering it is normal excepting at the site of the former operation, where it is red and dark-colored and smooth and shining. It is slightly movable, and does not seem to involve the jaw, but from its size and position the movements of the lower jaw are seriously interfered with. His hearing on the side of the tumor has become defective. There is no pain or tenderness on pressure, but there is a dull pain mostly at night, and at times severe shooting pains from the tumor into his ear. The glands of the neck are not enlarged. Facial paralysis since former operation.

November 29: Was shown at clinic. The tumor being well defined and not firmly fixed to the base of the skull, the case was a favorable one for operation. When under the anæsthetic, an incision was made down on the tumor from the zygoma to the angle of the jaw, a second cut was made from the first, back over the mastoid process. Flaps of the integument were dissected up, and the tumor dissected out. Another large fibroid growth, distinct from the former, was removed through a second opening made along the posterior border of the sterno-mastoid muscle.

The great depth of the tumor made the operation difficult and hazardous. It extended under the skull, and involved the ligaments of the inferior maxillary articulation, and was firmly bound to the under surface of the temporal bone. These fibrous connections were so dense that the knife had to be used at every step of the operation, the difficulties of which were greatly increased by the profuse hæmorrhage which was constantly occasioned by the division of numerous blood-vessels. Following the last rapid sweeps of the knife, the hæmorrhage was very great for an instant; the spouting vessels were quickly seized with catch-forceps and ligated. The temporal, facial, internal maxillary, and external carotid arteries, and many other smaller but very active vessels were divided.

After all the bleeding points had been secured, and the cavity thoroughly cleansed, the common carotid artery, the internal jugular vein, the hypoglossal, gustatory, pneumogastric and cervical nerves, the styloid and mastoid processes, were plainly in view in the bottom of the wound, and the transverse processes of the upper cervical vertebræ could be easily felt.

The wounds were thoroughly irrigated with bichloride solution; a drainage tube placed in each; then closed with numerous silk sutures, and dressed with oiled-silk, bichloride gauze, and sheet cotton.

December 2: Wound has healed superficially throughout its greater part. There is some pain when he swallows, but not at any other time.

December 5: Sutures, ligatures and drainage tubes removed. Cavities rapidly filling up. Discharge free and abundant.

December 9: Cavities of the wounds nearly closed. Discharge slight. Paralysis of face same as before the operation.

December 15: Posterior wound healed. A small depression remains open in the anterior wound, which healthy granulations are filling up.

December 20: Small granulating surface not healed, but it is closing so rapidly that the patient is permitted to leave the hospital.

NOTE.—Highest temperature, November 30, 102.2°. The patient sends information (March 26) that the wound is thoroughly healed, and as yet no appearance of recurrence of tumor.

GENERAL CORRESPONDENCE.

PARIS LETTER.

M. BOCQUILLON ON LIQUID VASELINE.—THE ACIDS OF THE STOMACH IN HEALTH AND IN DISEASE.—M. CLASSEN'S MODIFICATION OF DEROUBAIX' INSTRUMENT FOR CUTTING THE WIRE IN SUTURES.—A NEW BIPOLAR ELECTRODE.—CASES OF CIRRHOSIS, CURED.—TREATISE ON AMBULANCES AND PRACTICAL MILITARY KNOWLEDGE FOR THE USE OF ARMY DOCTORS: BY A. ROBERT.

M. BOCQUILLON ON LIQUID VASELINE.

At a recent meeting of the Societe de Medicine Pratique, M. H. Bocquillon made the following communication concerning liquid vaselines employed in subcutaneous injections:

Liquid vaseline is also called vaseline oil, soft or liquid paraffine, and is sold under the name of vaseline, petro-vaseline, petreoline, petroleine, neutraline, caucasine, etc.

Drs. Meunier (Lyons), Dujardin-Beaumetz and Leed (Paris) lately employed liquid vaseline as a dissolvant of antiseptic substances, which, employed in subcutaneous injections, exercise an irritating action upon the skin. The elimination of the irritating bodies was effected successfully by the dissolving property of the vaseline. In certain cases in which this method has been employed, the subcutaneous injections have caused abscesses and phlegmons. It was therefore necessary to determine the kinds of liquid vaseline to be employed. The section of chemistry, presided over by M. Dethan, has thoroughly investigated this question, and from the report made, the following conclusions may be drawn: Liquid vaseline is indicated in therapeutics; owing to its dissolvant power, it allows of the injection of irritating or non-soluble substances, as eucalyptol, sulphur of carbon, iodoform, sulphurated chloroform and hydrogen.

The purity of liquid vaseline may be determined by its density, taste, and neutrality.

THE ACIDS OF THE STOMACH IN HEALTH AND IN DISEASE.

The following are the results of a series of researches made by Drs. Cahn and Von Mering concerning the acids of the stomach in health and in disease:

(1) The quantity of lactic and hydrochloric acids in the stomach can be determined.

(2) In the healthy subject, hydrochloric acid is found in the stomach half an hour after eating.

(3) Under an exclusive meat-diet, hydrochloric acid alone is found.

(4) In a mixed diet, the stomach contains, both in a healthy and diseased state, hydrochloric, lactic, and volatile acids, the quantities varying according to the length of time the food remains in the stomach.

(5) In fever and anæmia, hydrochloric acid may be wanting, but it is always present in amyloid cachexia, and it is only exceptionally absent in carcinoma of the pylorus. Violet of methyl laniline does not form a reliable test for the presence or absence of hydrochloric acid in the stomach.

M. CLASSEN'S MODIFICATION OF DEROUBAIX' INSTRUMENT FOR CUTTING THE WIRE IN SUTURES.

This instrument is destined to facilitate the cutting of wires, in order to remove them from sutures, and is arranged in such a manner as to prevent tearing the flesh. It resembles a pair of tweezers, which has on the end of one of the branches a small hook, that serves to seize the wire while by means of a lever the sharpened end of the other branch is made to cut it. The instrument is manufactured in different lengths, with straight or curved ends.

A NEW BIPOLAR ELECTRODE.

At a recent meeting of the Academy of Medicine, M. Dujardin-Beaumetz presented, in the name of Dr. Apostoli, a new bipolar electrode. This instrument consists of a slightly conical ball made of gas carbon (or platinum), divided longitudinally into halves, which are isolated one from the other by a thin strip of gutta-percha. Each half of this ball is connected through a long stem to the poles of a battery. The object of the instrument is to limit on a given point of the skin or mucous membrane the action of a current to utilize all the current circulating between two poles that cannot be corroded, and to popularize the use of galvano-cautery.

CASES OF CIRRHOSIS, CURED.

At a recent meeting of the Societe des Hopitaux, M. Féréol again presented a patient who, since several months, appears to be cured of a well-marked case of cirrhosis.

M. Kendu cited the case of a young officer who, after fourteen punctures, appeared thoroughly cured of this malady.

M. Troisier thought that, in such cases, the diagnosis could not always be relied upon.

M. Guyot cited a case which came back to him after two years of perfect health since the first attack. The second attack was accompanied with anasarca and all the symptoms of cirrhosis, from which the patient died.

A TREATISE ON AMBULANCES AND PRACTICAL MILITARY KNOWLEDGE FOR THE USE OF ARMY DOCTORS: BY A. ROBERT, PROFESSOR AT THE VAL-DE-GRACE. PARIS, 1886.

This work constitutes the only one of the kind in the French language. In the opening chapter, the author sets forth the duties of the regimental doctor, and describes the transportation of patients, etc. Chapter second comprehends the sanitary service during a campaign, with a description of the ambulances. In the succeeding chapters, hospitals, pharmaceutical arrangements, provisions, the Geneva Society, and many other interesting matters connected with this subject, are discussed. The most interesting subject touched upon in this work, however, is certainly that concerning the suppression of all lint and linens not thoroughly aseptic. It is the author's opinion that all such material should be dipped into a two per cent. solution of corrosive sublimate, and then be submitted to a temperature of 120° centigrade (248° Fahrenheit). After this it should be packed away in an impermeable envelope.

HEALTH IN MICHIGAN DURING MARCH.

Reports to the Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of March (five weeks ending April 2), 1887, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, bronchitis, tonsilitis, consumption of lungs, influenza, intermittent fever, pneumonia, erysipelas, diarrhœa, measles, inflammation of kidney, remittent fever, inflammation of bowels, diphtheria, typho-malarial fever, scarlet fever, dysentery, inflammation of brain, typhoid fever (enteric), puerperal fever, membranous croup, cholera morbus, cholera infantum, cerebro-spinal meningitis.

For the month of March, 1887, compared with the preceding month, the reports indicate that erysipelas, measles, tonsilitis and consumption of lungs increased in prevalence.

Compared with the preceding month, the temperature for the month of March, 1887, was slightly higher, the absolute humidity and the day ozone were about the same, the relative humidity and the night ozone were less.

Compared with the average for the month of March for the nine years, 1879 to 1887, measles and erysipelas were more prevalent, and remittent fever, intermittent fever, pheumonia, scarlet fever, influenza, bronchitis and diphtheria were less prevalent in March, 1887.

For the month of March, 1887, compared with the average of corresponding months for the nine years, 1879 to 1887, the temperature was lower, the absolute humidity and the day ozone were about the same, the night ozone slightly less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of March, 1887, at forty-six places, scarlet fever at fifty-two places, typhoid fever at thirteen places, and measles at thirty-five.

Reports from all sources show diphtheria reported at twelve places more, scarlet fever at ten places more, typhoid fever at three places less, and measles at eleven places more in the month of March, 1887, than in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, April 7, 1887.

[It is a pleasure to notice that small-pox does not appear in the reports, and that the contagious diseases show a very low percentage.—EDITOR.]

EDITORIAL PERISCOPE.

MEDICAL LEGISLATION.

Minnesota is another accession to the list of states that have passed laws to regulate the practice of medicine and surgery, and to punish persons violating the provisions of the enactment. It has joined Illinois, New York, Pennsylvania, Iowa, Wisconsin and other states in forcing from their respective commonwealths the medical quacks and charlatans that have been preying upon the health and purse of their afflicted and credulous citizens. They realize that if it is necessary for the nation and the state to enact laws to protect their citizens against the sale of infected and adulterated foods, and to guard against the production and importation of those things injurious and destructive to the health and wealth of the people, it is infinitely more important that, when they are stricken with disease, and ready to grasp and embrace the first thing that promises assistance, they should be shielded from the deceits and the snares of the unprincipled quack, the counterfeit physician, whose suave manner conceals his spuriousness.

These laws are driving the professional vampires, who style themselves "cancer," "root," "Indian," and what-not doctors, from their lairs. The bastard physician who never listened to a medical lecture, but who left the livery stable or the bench to treat disease, is having his illegitimacy exposed, and is compelled to leave the states in which these laws have been enacted and enforced.

While these states are being purged of medical quackery, other states, however, less fortunate in having legislators equally alive to the best interests of their constituents, are in the very nature of things becoming reservations, where protection is afforded these impostors and extortioners, while the afflicted and the sufferer are permitted to become victims to their nefarious practices.

Michigan has long been a favorite retreat and asylum for medical crooks, quacks, and bastards. What an outrage upon a people that has founded and supports a grand university, in which a high standard of proficiency is required, especially from the graduates of the professional departments.

For a number of years attempts have been made with each legislature to have passed some law to correct this.

The legislature has now another opportunity to act, and it is earnestly hoped that our people will not be compelled to suffer from the mal-practice of the horde of cast-out "doctors" that are pouring into it from the zone of protected states that surround us.

A MEDICAL BILL.

The medical bill introduced in the house by Mr. Bardwell comes back recommended by the Committee on Public Health. The bill provides for "the registration of physicians and surgeons, and to protect the people of the State of Michigan from empiricism and quackery."

The special features of the bill are good, but they are not drawn strong enough to accomplish the best results. Compared with the medical bills now enforced in other states it is exceedingly considerate. The bill permits any person who has been in practice ten years or more, upon sworn statement of the same, to continue in practice, providing that, upon complaint made by any respectable citizen to the effect that the named person is not properly qualified, or has removed to this state in order to escape the operation of the law against quackery in force in the state from which such person removed, the person must appear before the board of examiners and submit to an examination under the provisions of the act.

The bill recognizes three schools of medicine—the regular, the homœopathic, and eclectic. No person, however, permitted to practice a limited department of medicine or exclusive system, can enter in more general practice or other system without examination. Those desiring to commence the practice after the organization of the examining board, must present evidence of a good moral character, and a medical diploma from a school requiring as a condition of graduation, attendance upon two full lecture courses of at least six months each.

The bill further provides, that all persons not having been engaged in the practice of medicine for a period of ten years prior to the passage of this act, and who does not possess a diploma from some accredited school of medicine, shall appear personally and be examined by the board of examiners.

The requirements are not nearly so rigid as that adopted by the Minnesota legislature. This act enumerates various branches not required in the Michigan law, as the required minimum standard. It requires the candidate to furnish proof of having attended *three* annual courses of lectures of not less than six months each, and to undergo a full examination, both scientific and practical, by the State Board of Examiners, without regard to college diploma.

The law of Pennsylvania requires all persons commencing practice in that state, not a graduate of some medical school of the state, to undergo a full examination before the medical faculty of some medical school within the state, requiring for such examination a fee of thirty dollars.

In every respect the Michigan bill is as lenient as is consistent with the accomplishment of its legitimate purpose. There is not a section that could not be made more complete and its results more efficient, without reaching the bounds that would be classed "strict legislation." But, with all its defects in some respects, and its weaknesses in others, the bill provides for a much better condition than that now existing. While it will not eradicate the old sinner, it does not foster and protect new ones. It should not receive any opposition on account of its deficiencies, and will, we hope, receive none for the good features which it provides.

CONDENSATIONS.

Bromides, Chloral and Opiates are too frequently prescribed in a sort of routine fashion for suffering women, is the opinion of Professor Playfair. There is nothing curative in these agents; and no greater harm can be done a patient with neurotic tendencies than to place a prescription of bromides, chloral or opiates in her hands and then let her depend upon herself.

Dedication of a New Medical College.—The magnificent new building of the medical department of the Western Reserve University was recently dedicated in Cleveland, Ohio. This structure, which is regarded one of the finest medical college buildings in the United States, was built by Mr. John I. Woods, of Cleveland, at a cost of $175,000, and presented by him to the Western Reserve University.

Contagiousness of Tetanus.—The theory that tetanus is contagious is fast receiving material in its favor. The *Lancet* calls attention to a paper read by M. Larger, in which he seems to show clearly that the disease is contagious. He mentions the occurrence of four patients who died of tetanus after different wounds, which should not have produced serious trouble, but who were placed in contiguous beds. Another case is cited in which a veterinary surgeon had an epidemic of tetanus in horses, five of which died after castration by an ecraseur used on a horse that died of tetanus. The ecraseur was then disinfected by heat, and no more tetanus was produced in animals on which it was afterwards used.

DURATION OF INFECTIOUSNESS OF ERUPTIVE FEVERS.—F. Pearse, in the *British Medical Journal*, fixes the duration of infectiousness of the principal contagious fevers as follows: Measles, from the second day for three weeks; scarlet fever, from the fourth day for six or seven weeks; small-pox, from the first day, under one month, probably three weeks; mumps, under three weeks; diphtheria, under three weeks.

WASHING INFANTS.—A valuable article on "The Hygiene of Children," by Dr. Paine, appears in the *New Orleans Medical and Surgical Journal*, in which the importance of body cleanliness is made prominent. He recommends that the whole surface of the body should be washed every day. The hands and face of children should always be washed before taking their meals, to prevent the ingestation of obnoxious matter.

MICHIGAN STATE MEDICAL SOCIETY.—The annual meeting of the Michigan State Medical Society will be held at Lansing on the 12th and 13th days of May. The officers and various committees are active in their efforts to make this meeting one of marked professional interest and scientific value. Those having papers to present are requested to send in the titles, with an abstract of their contents, to allow the various committees time to arrange for their discussion.

DISPLACED SPLEEN.—At a recent meeting of the Obstetrical Society of New York, Dr. Polk mentioned the following facts regarding a case of which he was reminded by the patient coming to his clinic a few days before looking and feeling very well. The abdominal cavity was opened under the impression that he had to deal with a pelvic abscess and probably pyo-salpinx, but he found that the tumor was a spleen on the anterior surface of the uterus, its convex side looking towards the hollow of the sacrum. The misplaced organ was removed without difficulty, and the patient recovered easily.

A SPECIFIC FOR CONSUMPTION.—Dr. McLaughlin, the physician-in-chief of the almshouse hospital at Philadelphia, has put into use the rectal injection of carbonic acid gas which has previously been passed through sulphuretted mineral water, in the treatment of consumption. It is claimed to be a specific, and Dr. McLaughlin's cases, which will soon be written up for publication, seem to support the claim. The treatment is simple, inexpensive, and can be carried out by any physician.

HEADACHES DEPENDENT UPON REFRACTIVE ERRORS OF THE EYE.—Dr. Riley, of New York, in the *Medical Monthly* shows how refractive errors of the visual organs produce headaches, and reflected neuralgic pains of the entire surface of the head and face. He urges that all patients complaining of persistently recurring headaches upon slight exertion requiring close application of the visual apparatus, should have their eyes examined to determine if refraction is abnormal. When the examination reveals a normal or emmetropic condition it is then proper to administer one or more of the numerous therapeutic agents to relieve the pain.

DEATH IN A SINGLE DRAUGHT OF WATER.—M. Dujardin-Beaumetz reports, in the *British Medical Journal*, the account of a family that had rented a house at a fashionable resort, and after moving into it were warned that the water in the well was contaminated and dangerous. No member of the family used the water until the last day of their stay, when, their supply of carried water being exhausted, the wife said: "For once, surely, there can be no harm in drinking the well-water." Out of the nine persons who drank of it, six died from typhoid. On examination, the water was found to contain the bacilli said to be causative of typhoid fever.

CONSTIPATION A CAUSE OF OVARIAN DISPLACEMENT.—In an article on "Constipation," contributed to the *Medical Register*, Dr. Fothergill states that the loss of activity in the muscular movements of the intestine which favors the tendency to a constipated condition at all stages of life, is perhaps most markedly seen in the case of young females. "A natural delicacy impels them to avoid the proximity of the closet, and gradually the bowels are taught to carry a greater and accumulating load. The pouches of the bowel become distended, and the fæces which pass them are alone voided, and are of more or less fluid consistency; so that a girl may believe her bowels open, or think herself the subject of looseness of the bowels, when in reality her abdomen is filled with fæces. One untoward result of such chronic constipation in young girls is displacement downwards of the ovaries, and these organs may become glued down to their new habitat by adhesive inflammation. Two unfortunate outcomes of this displacement of the ovaries are (1) sterility and (2) irritable ovary."

NEBRASKA ESTABLISHES A STATE BOARD OF HEALTH.—Nebraska is another added to the list of states that have lately established state boards of health. The bill recently passed by the legislation of this state provides that the governor shall appoint seven persons, two from each congressional district, and one at large, with the governor as their presiding officer. Persons appointed must be graduated physicians of at least ten years' consecutive practice, and the term of office is to be seven years. The provision, making the governor of the state the presiding officer of the board, is a new one. In carrying out the work of the board it may not be found.to be much of an aid, but it will place the board on a higher plane of official dignity and enable it to secure appropriations more easily.

"FŒTUS IN FŒTU."—In a letter from Atlanta, the correspondent of the *New Orleans Medical and Surgical Journal* describes a case of "*fœtus in fœtu,*" which he saw in the surgical clinic of the Atlanta Medical College. The tumor was situated upon the posterior aspect of the the pelvis of a boy fourteen years of age. The head, from which fine golden hair was growing, was located a little above and behind where the coccyx should have been, which was wanting, with the body directed upwards and to the left side of the body. It was nine or ten inches long, and three and a half or four inches across. The tumor, which extended down to the boy's rectum, was dissected out. The case has been seen by a number of surgeons, all of whom pronounced it a "*fœtus in fœtu.*"

WATCHING PORTS INFECTED BY CHOLERA.—Dr. Hamilton, Surgeon-General of the United States marine hospital service, says he is keeping a close watch upon the ports infected by cholera, and the nature of the intercourse between those ports and the United States, through the medium of consular reports required under the law of 1878. The *Sanitary News* expresses the opinion that this watch cannot be very close, as in Dr. Hamilton's weekly abstract of sanitary reports received, dated March 10, he gives the information concerning cholera in Buenos Ayres which was dated January 7. Cholera itself, under such means of communicating information, could arrive in the country before the intimation that it was likely to do so could reach the Surgeon-General. The *New York Tribune* says that merchandise from the River Plate and Chili is being steadily brought into that port, and distributed all over the country without any attempt at precautionary measures.

INHERITED PHTHISIS.—Writing upon the subject of heredity in tuberculosis, Professor Firket points out certain difficulties in the acceptance of the doctrine of the direct transmission from parent to off-spring. Such transmission may conceivably take place before conception, the tubercular bacilli being associated with the sperm or germ—a purely hypothetical idea—or through the medium of the placenta, and therefore solely by the maternal blood. He has not seen such positive proof of infection of the maternal blood, and thereby of transmission of disease to the fœtus in the case of tuberculosis, as there is in anthrax or syphilis or variola and other affections. Moreover, he shows that in ordinary phthisis fully one-half of the cases do not exhibit, in the presence of remote secondary lesions, evidence of blood infection. It is for the most part a local disease of the lung, and such secondary lesions as do occur may be explained in many cases apart from general blood contamination. This is very different from the old theory.

NEW PUBLICATIONS.

WEAR AND TEAR; OR, HINTS FOR THE OVERWORKED. By S. Weir Mitchell, M. D., LL. D. (Harvard), Member of the National Academy of Sciences; President of the College of Physicians of Philadelphia, etc. Fifth edition, thoroughly revised. 12mo. Cloth, $1.00. Philadelphia: J. B. Lippincot Company, 1887.

The author and publishers having put out a fifth edition of this little work, is evidence that it has not completed its usefulness and continues to be in demand as an educator in dress, diet and habits to the "thoughtless sinners against the laws of labor and of rest." The thoughts embodied in this small book were first published in *Lippincott's Magazine* sixteen years ago, and were made against the evils which result from tasking the brains of the girls of this country. Great changes for the better have been made since then, in matters of dress, diet and education, but the author feels that "there is still need to repeat and reinforce" his former remonstrances. The author's thoughts are not worded for the profession, but are couched in style and language that the lessons can be easily appreciated by those who are to profit by them.

PRACTICAL SUGGESTIONS RESPECTING THE VARIETIES OF ELECTRIC CURRENTS AND THE USES OF ELECTRICITY IN MEDICINE. With hints relating to the selection and care of Electrical Apparatus. By Ambrose L. Ranney, M. D., Professor of the Anatomy and Physiology of the Nervous System, in the New York Post-Graduate Medical School and Hospital; Professor of Nervous and Mental Diseases in the Medical Department of the University of Vermont; Fellow of the New York Academy of Medicine; Member of the Neurological Society of New York, of the New York County Medical Society, etc. 12mo. Cloth. New York: D. Appleton & Company, 1885.

The title of this work explains its field. The material was prepared to form a chapter in a coming work upon the diagnosis and treatment of nervous diseases. The author gives a very practical statement of the fundamental facts which should be comprehended before electricity is employed in the treatment of disease. These include a discussion of the varieties of electric currents, the construction of a galvanic cell, definitions of new terms, with practical hints regarding the selection, care and repair of electrical attachments and batteries. Electro-diagnoses and electro-therapeutics are amply considered.

The work furnishes just such instruction as is needed by the physician who has a battery and uses electricity in his practice, and to whom it is cordially commended.

BOOKS AND PAMPHLETS RECEIVED.

"The Presbyterian Eye, Ear and Throat Charity Hospital, of Baltimore City." Monthly Report. New Treatment of Cataract Patients. By Julian J. Chisolm, M. D., Surgeon in Charge of the Hospital. Reprint from the *Maryland Medical Journal*, March 19, 1887.

"The Proposed Laboratory of Hygiene at the Michigan State University—A Farmer's View." By S. S. Molton. Opinion of H. O. Hitchcock, M. D., of Kalamazoo; Abstract of Address of Dr. Henry F. Lyster to the Board of Regents; General Remarks on the Need of the Laboratory; Abstract of

Remarks by Henry B. Baker, M. D., to the Board of Regents; Editorial from the *American Pharmacist*, "A State Laboratory of Hygiene," by Professor Albert B. Prescott,—Some Solid Arguments; Maxims of Public Health," by W. Wight, A. M., M. D., Detroit. American Pharmacist Publishing Company, Detroit.

"Cyclopædia of Obstetrics and Gynæcology, Anatomy of the Internal and External Genitals, Menstruation and Fecundation, Normal Pregnancy and Labor." Being Volume I of a "Practical Treatise on Obstetrics." By Dr. A. Charpentier, Adjunct Professor at the Faculty of Medicine, Paris. Translated under the Supervision of, and with Notes and Additions by, Egbert H. Grandin, M. D., Obstetric Surgeon to the New York Maternity Hospital; Instructor in Gynæcology at the New York Polyclinic; Fellow of the Obstetrical Society, etc. In Four Volumes. Two hundred and sixty seven fine wood engravings and four colored plates. 8mo: five hundred and nine pages. New York: William Wood & Company, 1887.

"Hand-Book of Materia Medica, Pharmacy and Therapeutics, including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Extemporaneous Pharmacy, and Minute Directions for Prescription Writing." By Samuel O. L. Potter, M. A., M. D., Professor of the Theory and Practice of Medicine in the Cooper Medical College of San Francisco; Author of "Quiz-Compends" of Anatomy and Materia Medica, "An Index of Comparative Therapeutics," and a "Study of Speech and its Defects;" Late Assistant Army Surgeon United States Army. 12mo: eight hundred and twenty-eight pages. Cloth, $3.00. Philadelphia: P. Blakiston, Son & Company, 1887. For sale by Sheehan & Company, Ann Arbor, Michigan.

MEDICAL DIGEST.

WHAT TO DO IN CASES OF POISONING

The following valuable information is given by Dr. William Murrell in the *Medical Register:*

The Diagnosis of Cases of Poisoning.—How can you tell from what poison the patient is suffering? Sometimes nothing is more easy, whilst at others it is extremely difficult to arrive at a correct conclusion. A search for the bottle which contained the poison, or an inquiry of the nearest chemist, may, of course, help you, whilst a knowledge of the sufferer's previous habits, and of his disposition, may be of some assistance. The diagnosis is not always so easy as it looks at first sight. For example, you are called in to a patient who is evidently suffering from the effects of some narcotic poison, and on a table close at hand you find a hypodermic syringe and a bottle of morphine; you conclude at once that it is a case of morphine poisoning, but you may be wrong. The patient had intended to kill himself that way, but dreading the trifling pain of the puncture, or not being expert in the use of the syringe, changed his mind at the last moment, took three hundred grains of chloral and threw the bottle under the grate. (For hint as to mode in which death by suicide may be made to simulate death from natural causes, see death of Gammon, in Warren's "Ten Thousand a Year"). Do not forget the possibility of a number of poisons having been taken together. In one case a patient adopted a curious combination—a packet of Battle's vermin killer, two drachms of laudanum and then half a drachm of red precipitate. It is a good plan to make yourself acquainted with the composition of those patent medicines which possess active properties. There is no royal road to diagnosis, and the only way to arrive at a correct conclusion is to utilize your knowledge of the physiological action of drugs. The following lists may be of some use, but no attempt has been made to render them complete, and they must be taken as being merely suggestive.

You find the Patient Dead.—Prussic acid (death in a few minutes at the outside); cyanide of potassium (usually kills very quickly); strong ammonia (may kill in a few minutes); carbonic acid gas (if pure may kill almost at once); carbonic oxide; oxalic acid. Almost any active poison if given in a very large dose.

The Patient is Comatose.—Opium; morphine; alcohol; chloral; chloroform; camphor.

The Patient is in a Condition of Collape.—Strong acids; alklies; aconite; antimony; arsenic; tobacco: lobelia. Most poisons towards the last.

The Patient is Delirious.—Belladonna (noisy, pleasing delirium, "the insane root that takes the reason prisoner"); hyoscyamus; stramonium; cannabis indica; alcohol; camphor.

The Patient is Tetanised.—Nux vomica; strychnine (think of vermin killers); antimony; arsenic. There may be a condition approaching tetanus from excess of pain—in poisoning by strong ammonia for example.

The Patient is Convulsed.—This may mean anything, the term being used vaguely. Antimony; arsenic; carbonic oxide; aconite; strong acids, such as acetic, or sulphuric, or strong alkalies, such as ammonia.

The Patient is Paralyzed.—Physostigmine; conium (from below upwards); gelsemium; aconite; arsenic; lead.

The Pupils are Dilated.—Belladonna and atropine; hyoscyamus; stramonium; opium (in last stage); aconite; alcohol; chloroform (when taken in liquid form); conium.

The Pupils are Contracted.—Opium (very strongly if a large dose); physostigmine; chloral (during sleep).

Skin Dry.—Belladonna; atropine; hyoscyamus; stramonium.

Skin Moist.—Opium; aconite; antimony; alcohol; tobacco; lobelia. Almost any poison during the stage of collapse.

Rash on Skin.—Belladonna (resembles rash of scarlet fever); stramonium (much like the belladonna rash); chloral (urticaria); arsenic (eczema, or may be like scarlet fever); antimony (pustular, like small-pox, but rare); opium (itching, followed by urticaria; or papulous or roseolous patches, not common). Many other drugs excite cutaneous eruptions. For example, bromide of potassium and tar produce acne; copaiba, cubebs and salicylic acid give rise to urticaria, and iodide of potassium may bring out a crop of petechiæ. Croton oil, tartar emetic, sulphur, hydrastis and arnica, are well known rash producers when applied locally. I have known croton-chloral hydrate given for whooping-cough bring on urticaria. The discoloration of the skin resulting from the long continued administration of silver requires no detailed notice.

Smell of the Drug in the Breath.—Prussic acid; laudanum; alcohol (brandy, whiskey, etc.); carbolic acid; acetic acid; ammonia; chloroform; creasote; iodine; phosphorus; camphor; nitrobenzole. The smell is not always a reliable guide; for example, laudanum is not uncommonly taken in porter.

Mouth and Tongue Dry.—Belladonna and atropine; hyoscyamus; stramonium; opium.

Salivation.—Arsenic: ammonia; cantharides. Most drugs which produce a corrosive action on the mucous membrane of the mouth or œsophagus. Mercury, jaborandi and muscarin may also be mentioned.

Mouth Bleached.—Carbolic acid (mucous membrane white and hard); ammonia (epithelium coming off in flakes); potash; soda; nitric acid (white, soft or yellow); corrosive sublimate. The numbness of the lips, mouth and tongue, produced by aconite will not be forgotten.

The Patient is Vomiting.—Arsenic (brown, mixed with blood); antimony (white, stringy mucous, may be tinged with blood); digitalis (vomited matter has a grass green color); aconite; colchicum; colocynth; ammonia (stringy saliva mixed with blood, fumes with hydrochloric acid); phosphorus (vomited matter luminous in the dark).

The Patient is Purged.—Arsenic (continuous with much pain, stools mixed with blood); antimony; corrosive sublimate (green in color, mixed with blood); cantharides (blood and slime); digitalis; colchicum; colocynth.

The Patient is Suffering from Colic.—Lead (about navel, eased by pressure); copper; arsenic; colocynth.

The Patient is Suffering from Cramp.—Arsenic; antimony; lead.

The Drug was given Hypodermically.—Morphine; atropine; strychnine.

The Poison was Inhaled.—Ammonia; prussic acid; chloroform; ether; benzine; carbonic acid gas; carbonic oxide; coal gas; sewer gas; cess-pool gas and emanations.

Poisons Commonly used for Murder.—Arsenic; antimony; aconite; digitalis; opium; strychnine; prussic acid.

Poisons Commonly Employed for Suicidal Purposes.—Opium and its preparations (commonest of all poisons); oxalic acid; rat paste; prussic acid; chloral; sugar of lead; strychnine. Patent medicines of all kinds unintentionally.

Drugs used Popularly as Abortifacients.—Ergot; rue; gin and pennyroyal; savine; bitter apple (colocynth, very popular); hickery pickery (hiera picra, or holy bitter, a mixture of four parts of aloes and one of canella bark); Spanish fly (cantharides); yew tree tea; green tea in large quantities; quinine is often supposed to exert a specific action on the pregnant uterus, but that it does so I do not for one moment believe, given, that is to say, in ordinary doses for its tonic action. I have now under treatment a woman who is at least eight months advanced in pregnancy. Last week she had four grains of good sulphate of quinine three times a day, and this week she has six grains three times a day, but there has been no action on the uterus. I should say that two five-grain compound colocynth pills at bed-time would be far more likely to do harm. Actæa racemosa (cimicifuga racemosa) is sometimes said to be an abortifacient but there is very little truth in the statement; at all events, half a drachm of the tincture three times a day is safe enough even in the later months of pregnancy. Pulsatilla is supposed to be capable of producing abortion, but this again rests on very imperfect evidence. "A handful of parsely chopped fine in a bottle of gin, allowed to stand a week, and a wine-glassful three times a day."—*Hospital Patient.* What truth there is in this I do not know, but the *rationale* is clear enough, parsley contains apiol, which is a powerful oxytocic. Jaborandi was at one time supposed to exert a powerful action on the uterus, but the idea is now exploded.

Indigenous Poisonous Plants.—Woody nightshade (solanum dulcamara); garden nightshade (solanum nigrum); deadly nightshade (atropa belladonna); aconite, monkshood, wolfsbane, or blue rocket (aconitum napellus); foxglove (digitalis purpurea); spotted hemlock (conium maculatum); arum (arum maculatum); colchicum (colchicum autumnale); bryony (bryonia dioica); henbane (hyoscyamus niger); fly agaric (amanita muscaria); mezereon, or spruge olive (daphne mezereum); laburnum (cytisus laburnum); and a host of others. These will be found figured in Stephenson and Churchill's "Medical Botany, and in Bentley and Trimen's "Medicinal Plants."

DIPHTHERIA.

Dr. I. U. Love, in an article published recently in the *Weekly Medical Review,* after a full discussion of the etiology, treatment, etc., concludes as follows:

I have since November, 1884, given no quinine and iron, except in the period of convalescence as a tonic; and absolutely no chlorade of potash, believing that it is frequently productive of harm, and of all the remedies probably more abused by the laity and the profession, save quinine.

In children of a larger growth I occasionally order gargles of the sublimate, one part to two thousand of water, alternated with a solution of boracic acid, thymol and eucalyptol.

Now and then the local application of oil of turpentine to the pharyngeal surface is indicated, and a more healthful application to a mucous surface was never made, and as a diffusible stimulant and an accelerator to the glandular system, nothing is better.

The bichloride and the benzoate of soda, as administered above, are admirably successful in controlling and relieving doubtful cases, which never advance further than being tonsilitis or ulcerated sore throat.

From the foregoing, based upon my reading, observations and experience of the past fifteen years, I feel justified in arriving at the following conclusions:

(1) In the management of diphtheria, nutrition, stimulation, antiseptics and elimination are the most potent means of antagonism.

(2) The nourishment should be of a character to be readily assimilated, and in a majority of the cases should be peptonized.

(3) Good whisky or brandy as diffusible stimulants are to be preferred.

(4) The bichloride of mercury in small doses frequently administered, accompanied with liberal quantities of water, coupled with the benzoate of soda, are the most reliable antiseptics and glandular stimulants at our command.

(5) That too great stress cannot be given to the sodium benzoate as a local and constitutional measure.—*American Medical Digest.*

MANAGEMENT OF SIMPLE CONSTIPATION.

Sir Andrew Clark gives the following instructions for the management of simple constipation:

(1) On first waking in the morning, and also on going to bed at night sip slowly from a quarter to half a pint of water, cold or hot.

(2) On rising, take a cold or tepid sponge bath, followed by a brisk general towelling.

(3) Clothe warmly and loosely; see that there is no constriction about the waist.

(4) Take three simple but liberal meals daily; and, if desired, and it does not disagree, take also a slice of bread and butter and a cup of tea in the afternoon. When the tea is used it should not be hot or strong, or infused over five minutes. Avoid pickles, spices, curries, salted or otherwise preserved provisions, pies, pastry, cheese, jams, dried fruits, nuts, all coarse, hard and indigestible foods taken with a view of moving the bowels, strong tea, and much hot liquid of any kind, with meals.

(5) Walk half an hour twice daily.

(6) Avoid sitting and working long in such a position as will compress or constrict the bowels.

(7) Solicit the action of the bowels every day after breakfast, and be patient in soliciting. If you fail in procuring relief one day, wait until the following day when you will renew the solicitation at the appointed time. And if you fail the second

day, you may, continuing the daily solicitation, wait until the fourth day, when assistance should be taken. The simplest and best will be a small enema of equal parts of olive oil and water. The action of this injection will be greatly helped by taking it with the hip raised, and by previously anointing the anus and the lower part of the rectum with vaseline or with oil.

(8) If by the use of all these means you fail in establishing the habit of daily or of alternate daily action of the bowels, it may be necessary to use artificial help. Your object in doing this is not to produce a very copious dejection, or to provoke several smaller actions; your object is to coax or persuade the bowels to act after the manner of nature by the production of a moderate more or less formed discharge. Before having recourse to drugs, you may try, on waking in the morning, massage of the abdomen, practiced from right to left along the course of the colon; and you may take at the two greater meals of the day a dessertspoonful or more of the best lucca oil. It is rather a pleasant addition to potatoes or to green vegetables.

(8) If the use of drugs is unavoidable, try the aloin pill. Take one half an hour before the last meal of the day, or just as much of one as will suffice to move the bowels in a natural way the next day after breakfast. If it should produce a very copious motion, or several more small motions, the pill is not acting aright; only a fourth, or even less, should be taken for a dose. When the right dose is found it may be taken daily, or on alternate days, until the habit of daily defecation is established. Then the dose of the pill should be slowly diminished, and eventually artificial help should be withdrawn. The aloin pill is thus composed:

℞. Aloinæ	½ gr.
Ext. nucis vom	½ gr.
Ferri sulph	½ gr.
Pulv. myrrhæ	½ gr.
Saponis	½ gr.

Fiat. pill one

If the feces are dry and hard, and *if there is no special weakness of the heart*, half a grain of ipecacuanha may be added to each pill. Should the action of the pill be preceded by griping and the character of the action be unequal, half a grain of fresh extract of belladonna will probably remove these disadvantages. If the aloin pill gripes, provokes the discharge of much mucus, or otherwise disagrees, substitute the fluid extract of cascara sagrada, and take from five to twenty drops in an ounce of water either on retiring to bed or before dinner. And when neither aloin nor cascara agree, you may succeed by taking before the midday meal two or three grains each of dried carbonate of soda and powdered rhubarb.

The extract agent employed for the relief of constipation is of much less importance than its mode of operation. If, whatever the agent may be, it succeeds in producing after the manner of nature one moderate formed stool, it may be, if necessary, continued indefinitely without fear of injurious effects. But, treated upon physiological considerations, I have the belief that in the great majority of cases simple constipation may be overcome without recourse to aperients.—*Lancet.*—*New York Medical Journal.*

SOME CERTAINTIES IN THE THERAPEUTICS OF EPILEPSY.

The following aphorisms, given in the *New York Medical Journal*, express the views of Professor Dana regarding the therapeutics of epilepsy:

No more instructive chapter could be written than one giving a record of the changes and contradictions of opinion during the two thousand years in which medical experiences have been recorded regarding remedies for epilepsy.

If one may be permitted to be aphoristic on subjects like this, I would express my views regarding the therapeutics of epilepsy as follows:

(1) Diet, exercise, and proper hygienic treatment, including baths, rank above all other single therapeutic measures.

If I had to choose between them and bromides even, I would select the former.

(2) The bromides take the second rank in the treatment of epilepsy. All bromides act alike in this disease. Occasionally changing and mixing reduces the attacks for a time, and benefits the stomach.

(3) The best bromides are those of potassium, sodium, ammonium, and hydrogen (hydrobromic acid); possibly also nickel.

(4) Bromides should be given in daily doses of one drachm, increased gradually until the attacks are suppressed, or the dose reaches four drachms to one ounce daily. Few patients can tolerate more than this latter dose.

(5) When the fits are suppressed, the bromides should be carefully reduced, but never entirely stopped for at least two years after the last fit.

(6) In most cases, and especially in nocturnal epilepsy, an extra large dose of bromide should be given at night.

(7) It is very important that bromides should be chemically pure, that their use should be continued a very long time, and that their depressing effects should be offset by tonics and all possible roborant measures.

(8) The best non-specific adjuvants (drugs) to the bromides are potassium iodide (in syphilitic epilepsy), potassium bicarbonate (in lithæmic and rheumatic states), carbonate of ammonium, the hypophosphites, arsenic, iron, and quinine.

(9) The other chief adjuvants to the bromides are diet, exercise, a regular life, hydrotherapy, counter-irritation on the neck, and, in the line of drugs, zinc, belladonna, strychnine, valerian, and the nitrites.

Other drugs which sometimes help the bromides are digitalis, cannabis indica, ergot, conium, chloral, the salts of copper, picrotoxin, and borax. None of these do any permanent good alone, and their value as adjuvants is not uniform or generally conceded.

(10) The best substitutes for the bromides, when these do no good or do harm, are belladonna, zinc, strychnine, glonoin, borax, and alteratives.

(11) Bromides stop the fits in from five to ten per cent. of cases, oftener if given early in the disease, if given to young children, and if given in cases that develop after twenty-one. Bromides lessen the fits in from eighty to eighty-five per cent. of cases. Bromides do no good, or do actual harm, as regards frequency of attacks, in from five to ten per cent. of cases. Bromides do no actual good to the patient in a much larger proportion of cases.

(12) To prevent bromide acne, arsenic, calcium sulphide, baths, and diuretics are the best measures, or hydrobromic acid may be used. In all cases dilute the bromide preferably with carbonic acid water or Vichy in the proportion of six ounces of water to a scruple of the drug.

(13) The remedies that are especially useful in *petit mal* are, after the bromides, belladonna, glonoin (?), cannabis indica (?), cod-liver oil, ergot (?), counter-irritation at the back of the neck, and cold spinal douches.

(14) For epilepsy in children, besides the bromides it is advisable to employ a milk diet, rest, and oxide of zinc. Belladonna, if tried, should be given cautiously.

(15) For adults and chronic cases, use the bromides, bella-

donna, iodide of potassium, and ammoniated sulphate of copper. Oxide of zinc is here of less value.

(16) For nocturnal epilepsy, increase the dose of bromide at night, and add chloral or digitalis. Give also, if needed, strychnine. Raising the head of the bed or making the patient sleep in a chair at night are measures to be tried.

(17) For hysterical and erythritic cases, with or in place of bromides give a diet of milk and vegetables. Try turpentine, valerian, or zinc. Belladonna is usually contra-indicated.

(18) Counter-irritation by means of blisters, issues, and setons at the back of the neck, is a useful adjunct to treatment, especially in *petit mal* and in cases with mental derangement.

(19) For the status epilepticus, give large enemata of chloral, and use emetics and purges. Venesection is often efficacious, morphine is dangerous, chloroform is only palliative, and nitrite of amyl is of little value.

(20) To prevent impending attacks, the best remedy is nitrite of amyl, which may be carried in a phial filled with cotton. Inhalation of chloroform or ammonia, the internal administration of ammonia, spirits of lavender, or alcohol, a sternutatory, and pressure on the carotids—all are measures which sometimes stop the attack.

(21) Alterative and habit-breaking drugs, such as mercury, iodide of potassium, arsenic, antimony, are useful in epilepsy.

(22) No surgical measures upon ovaries, uterus, testicles, cranium, or elsewhere will cure an established, long-standing epilepsy except in rare cases. Such operations, if done, should be undertaken early, before the patient has had an excessive number of fits. Ligaturing the vertebrals has already killed two patients, and has no standing in the surgical therapeutics of epilepsy. Oöphorectomy is not indicated in true epilepsy. Ligaturing the carotids is a measure fallen into disuse. Trephining in traumatic cases of epilepsy has cured less than one half of patients. Trephining cures some cases even when there is no depression of bonce. Trephining for epilepsy is an operation which has called out more contributions to medical literature than any other single anti-epileptic measure, unless it is the bromides.

THERAPEUTIC PROGRESS.

SOZODONT.—This popular preparation contains: Soap, five parts; glycerine, six parts; spirits, thirty parts; water, twenty parts. It is flavored with several cheap oils and highly colored.

DaCosta's Formula for Fatty Heart.—

℞. Sulphate of strychnine....... .... gr. ⅙.
Sulphate of iron................................ gr. xij.
Extract taraxacum........................... gr. xviij.
M. Ft. Pills number twelve. Sig. One pill after each meal.

For the Cough of Phthisis.—

℞. Terebene,
Creasote, āā... .... fʒij.
M. Sig. Inhale fifteen or twenty drops from a hot sponge several times daily.

Ichthyol in Erysipelas.—In a late paper by Professor Nussbaum, on erysipelas, the author speaks very highly of the use of ichthyol in the form of an ointment, made of equal parts of ichthyol and vaseline, to be painted over the whole erysipelatous area, then covered with ten per cent. salicylic lint, and fixed with a gauze bandage.

Palatable Terebene.—The following formula is said to produce a good mixture, and is not unpalatable:

℞. Terebene.. 1 part.
Glycerine,
Spirits vini. rect.,
Simple syrup, āā....... .... 15 parts.
M. Sig. A dessertspoonful for a dose.

Helenin in Chorea.—On account of its alleged anti-spasmodic properties, it is stated, Dr. Dana has used helenin in three cases of chorea. The patients all reported themselves improved under its use, but the drug was too expensive to be extensively tried. It was given in alcoholic solution one-third grain three to four times daily. It has been successfully employed by French physicians in bronchitis and spasmodic cough.

The Binidodide of Mercury as an Emmenagogue.—Dr. Illingworth has found the red iodide of mercury a certain and safe emmenagogue. He uses the following formula:

℞. Solution hydrarg. bichlor.................. ℥j.
Iodide potassium.............................. ʒss.
Citrate ammon. and iron.................... ʒj.
Chloric ether.................................... ʒij.
Water, ad... ℥viij.
Sig. One-half ounce after each meal.

Liquid Vesicant.—Bidet recommends the following: Cantharides is treated with chloroform in a distillation apparatus so that the quantity of choloform shall remain by redistillation a litre in the following mixture:

℞.	Cantharides	1000 parts.
	Chloroform	q. s.
	Wax	125 parts.

Ethyl Cocaine.—Merck has produced synthetically an ethyl compound corresponding with cocaine, which contains methyl radical. Professor Talk, of Kiel, has tested the physiological action of this new alkaloid, which he finds similar to that of cocaine, but less powerful. It does not have any mydriatic action, and is less poisonous to animals than cocaine. The compound is freely soluble in alcohol and ether, almost insoluble in water. Melting point 102° centigrade (—215.7° Fahrenheit).

Hyoscyamine in Paralysis Agitans and Chorea.—As a rule, hyoscyamine relieves the tremor of paralysis agitans when the disease is not too far advanced. Dr. Dana has used the drug in a large number of cases of chorea, and in the great majority of cases it caused decided improvement. It is prescribed as follows:

℞.	Merck's crystal hyoscyamine	gr. j.
	Distilled water	℥j.

M. Sig. Eight minims three times daily, increased to fifteen or twenty minims.

Eulylyptol.—This uneuphonious name has been applied by Dr. Schmeltz to a new antiseptic agent which consists of a mixture of six parts of salicylic acid with one each of phenol and oil of eucalyptus. It is described as having a strong aromatic odor, and an acrid burning taste, is nearly insoluble in water, but dissolves readily in absolute alcohol, ether, chloroform and a mixture of equal parts of alcohol and glycerin. It is also soluble in ammonia and in alkaline solutions. Dr. Schmeltz regards it as superior to iodoform, corrosive sublimate, or phenol. It completely arrests fermentation and putrefaction.

Lanoline in Eczema.—Professor Widerhoger gives the following method of treatment as excellent for eczema: Let the seat of the affection be rubbed with soap and wet flannel till a lather is produced, then wiped dry; then wrap round night and morning with linen thickly smeared with lanoline having five per cent. of bismuth subnitrate added. Lanoline salve is readily tolerated by the skin (in the case of little children especially), on account of its forming very heavy fatty acids; whilst other fats (and vaseline) form very light fatty acids on coming in contact with the skin, and in children the skin is very sensitive to fatty acids.

CANNABIS INDICA IN THE TREATMENT OF DYSENTERY.—Staff Surgeon Rennie, of Cawnpore, has treated dysentery successfully with tincture of cannabis indica. He prescribes the following:

℞.	Tincture of cannabis	♏xv.
	Bismuth subcarbonate	gr. v.
	Mucilage of gum arabic	♏xxx.

Mix and add:

℞.	Tincture of ginger,	
	Comp. tincture cardamom,	
	Spirits of chloroform, āā	♏xx.
	Cinnamon water, ad. q. s.	℥j.

This quantity to be taken after each meal. The administration requires to be kept up for several days after all symptoms have ceased.

REVIERE'S SEDATIVE POTION.—Dr. Geneuil, suggests the following modification of this well known and valuable officinal preparation where there is vomiting accompanied and caused by gastric hepatic or enteric pains:

℞.	Hydrochlorate of morphine	gr. j.
	Cherry laurel water	ʒijss.
	Sulphuric ether	ʒj.
	Water to make	℥vij.

M.

Dissolve and divide into two equal parts. To the first part add one drachm of bicarbonate of potassium and one ounce of syrup of orange flowers. To the second add one drachm of citric acid and one ounce of aromatic syrup of citric acid (flavored, if desired, with essence of lemon). A tablespoonful of each mixture to be administered (by itself) every five minutes until relief is obtained. The alkaline syrup should be given first. If the pains are not very severe, or the patient be very nervous, the morphine may be replaced by double the indicated quantity (or two grains) of codiene.

METHYLAL.—Methylal, or methylene dimethylate $C_3H_8O_2$, is a product of the oxidation of methylic alcohol. Although discovered nearly half a century ago, its therapeutic properties have only recently been investigated. It is a limpid liquid, having an agreeable odor recalling that of acetic acid, and an aromatic taste. Its specific gravity is 0.8551, boiling point 42° centigrade (108° Fahrenheit). It dissolves in alcohol and ether, also in three times its volume of water. E. Personali, of Turin ("Rep. de Pharmacie," November, 1886), finds that this agent rapidly produces in animals a condition of anæsthesia, followed by profound sleep. It is likely to prove useful as a hypnotic and anodyne. The following formulæ for its use are given in *Nouveaux Remedes:*

LINIMENT OF METHYLAL.

℞.	Alcohol, eighty per cent	110 parts.
	Oil of lavender flowers	5 parts.
	Methylal	10 parts.

Used for rheumatic pains.

TOOTHACHE DROPS.

℞.	Tincture of coca	8 parts.
	Methylal	2 parts.

Signor Personali finds methylal to be an antidote to strychnine, a small quantity sufficing to suspend the tetanic spasms.

SPECIAL NOTICES.

J. R. Fortson, M. D., Kiowa, Indian Territory, recently used tongaline in a case of neuralgia of the pericardium, and secured permanent relief from two doses of a teaspoonful each. Has also found it infallible for rheumatism.

Gentlemen: Your crystalline phosphate was received, and administered to a patient, whose condition I assumed indicated phosphate. The patient did not die, but recovered. I leave you to draw inference.—J. E. Clark, M. D., of Detroit, Michigan, to the Provident Chemical Company, Saint Louis, Missouri.

Drs. Manning and Ashby, editors *Maryland Medical Journal*, Baltimore, Maryland, have this to say concerning Colden's liquid beef tonic: This excellent preparation has become deservedly popular with the medical profession in the treatment of diseases where an agreeable article of diet and tonics is required. It is recommended in typhoid and malarial fevers, consumption, loss of appetite, and debility induced by any cause, and it is tolerated when other forms of animal food are rejected. We invite those who have not used it to try it.

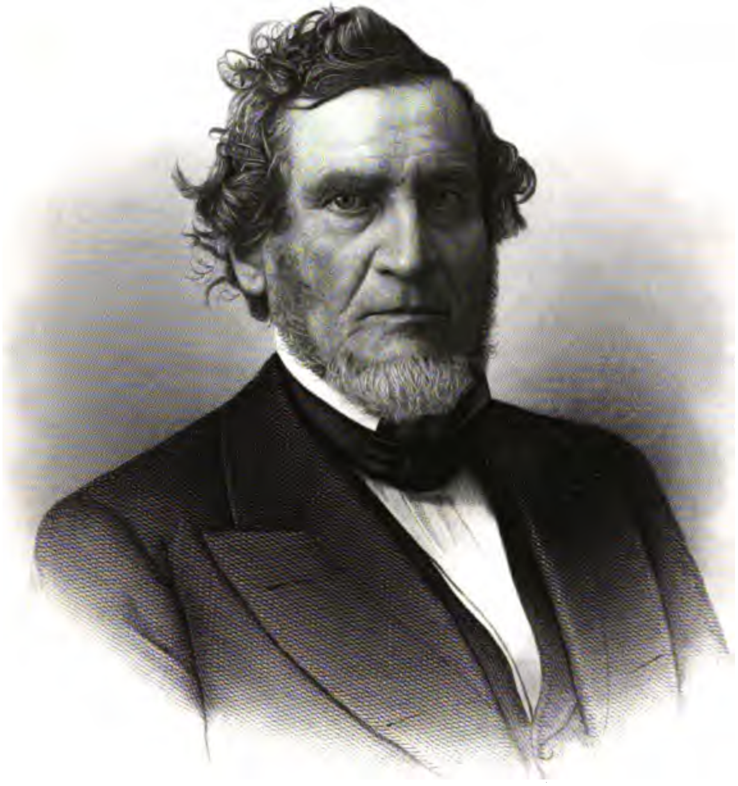
Dr. Thomas Little, of Spirit Lake, Iowa, in comparing papine with other forms of opium, says: "It meets the requirements of a class in which opiates are indicated, but in which the 'remedy is worse than the disease.' One case in particular has given me a great deal of trouble for years. I have tried opium in every form, and many other narcotics, alone and in combination; but constipation, nausea and nervous prostration have been the inevitable results. Some two months since I obtained some papine and commenced on this case, with the happiest effect."

SCOTT & BOWNE, manufacturing chemists of New York, make a specialty of producing an emulsion of cod-liver oil with hypophosphites. Their great care in selecting the oil and in making the combination is amply proven by the high therapeutical value set upon the emulsion by the profession. It is no new remedy, but has been steadily growing in demand for a number of years. It is certainly very useful in restoring wasting tissue, and in cases of scrofulous children it acts almost as a specific. They also offer a buckthorn cordial which is highly useful in the treatment of constipation.—*Massachusetts Eclectic Medical Journal.*

HYPODERMIC USE OF LISTERINE.—There is one mode of its administration to which attention may be called. I allude to its hypodermic administration. Keeping in view the fact that it is antiseptic, tonic, non-toxic, its use is indicated in cases of too rapid retrograde metamorphosis, or perversion of vital force. During the past four years I have proved this to my entire satisfaction. For the past four months this section has been scourged with a severe epidemic of dysentery and cholera infantum. I have used listerine, when indicated, by the mouth, by rectal injection, and hypodermically, and the latter method has always yielded the best results.—F. A. Rew, M. D., in *Medical Bulletin.*

TWO CASES OF DYSMENORRHŒA.—(1) Young married woman with extreme dysmenorrhœa. Examination revealed a lacerated cervix (this trouble was consequent to parturition), and an aggravated endometritis. Treatment was given for one month, consisting of local applications and in the internal administration of aletris cordial. Patient positively cured, much to my surprise, as my prognosis was far different. (2) Girl, fifteen years of age. Commenced to menstruate at fourteen. For nine months previous to treatment had not been free from pain in lumbar region. A scanty, coffee-colored flow, attended with intense pain, at irregular intervals. Cephalalgia, nausea and constipation, superadded, had rendered her peevish, melancholy, and anæmic. Administered one bottle of aletris cordial, teaspoonful doses, quieted pain with suitable analgesics, and in two months discontinued all treatment. Heard from her as follows: Had menstruated once with scarcely any pain, the color was normal, her lumbar distress had disappeared, and color was returning to her cheeks. Can highly recommend the aletris cordial, and shall expect great results myself.—H. S. Drake, M. D., Middleboro, Massachusetts.

It is a well known fact that there are druggists in every large city who are not to be trusted with the filling of a prescription that calls for any expensive drug. They come and go, so that at last physicians are compelled to designate certain of the drug fraternity as trustworthy, and insist upon their patients going to these alone for their medical supplies. If they fail to do this, their work is thrown away and their reputations go with the failure of their remedies in critical cases. A few cases from actual observation and experience will illustrate this better than a volume of argument. (1) Thirty grains of quinine, in three doses, to be taken at hourly intervals, were prescribed for a young man suffering from ordinary intermittent fever. The doses were taken as directed, but no signs of cinchonism were induced, and the disease progressed without change. The same doses, in "Warner's sugar-coated pills" were ordered, with the effect of inducing well marked cinchonism with cure of the disease. (2) In a case of profuse menorrhagia, one ounce of fluid extract of ergot was ordered, with directions to take one fluid drachm every hour until the hæmorrhage ceased. The entire amount was taken without result. An ounce of "Squibb's fluid extract of ergot" was ordered—same directions, and the flooding ceased after the second dose. (3) Four ounces of a mixture of bromide of potassium and chloral, each an ounce, with tincture of hyoscyamus and fluid extract of cannabis indica, in appropriate doses, were ordered, with directions to take one teaspoonful every hour until sleep should be induced. An ugly, muddy mixture was received, which produced nausea and headache, but no sleep. A similar prescription instead of the above extemporaneous officinal combination, was ordered only "Battle's bromidia" was designated, which induced refreshing sleep after a few doses of from twenty to thirty drops had been taken.—Extract from an article in the December *Medical Brief*, by William B. Hazard, Professor of Principles and Practice of Medicine, College of Physicians and Surgeons, Saint Louis.



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ORIGINAL ARTICLES.

LACERATION OF THE PERINEUM.

BY HENRY O. MARCY, A. M., M. D., BOSTON, MASSACHUSETTS.

The present paper is a further contribution to the study of perineal injuries, and is evoked in part because of an interesting article, published in the *Obstetric Gazette* for March, by Dr. J. M. Baldy, of Philadelphia. From previous contributions upon this subject, my opinion and methods are well known to the profession and my present observations are based upon the studies made of over fifty operative cases since my last article, published in the "Transactions of the International Medical Congress of 1884." I cannot but express surprise that the anatomy and function of the perineum seems so little understood by the profession at large and, when we consider that the general practitioner must meet with conditions where the floor of the pelvis may be endangered in every case of labor, it seems strange that so little attention and thought are given to the subject. Suffering, dependent upon injury, is the daily complaint, and nervous disturbances, in great variety, result therefrom. Such cases are common even when there is no prolapse and where the restoration of the parts is followed by permanent relief.

The parturient and fecal canals are supported in the pelvic basin in close apposition and the functional relationship is often such that the one may encroach upon the other in such a way as to occupy nearly all the space accorded to both. This is especially true in parturition, when the rectal space is reduced to a thin folded tube; and often, in elderly women, the rectum becomes saccated, pushing forward the posterior vaginal wall, forming a considerable sized external tumor. The pelvic floor is so formed and blended about these openings that it not only properly supports these tubes, but also materially aids them in their physiological function. In intimate relation to both, are the bladder and uterus in their ever-varying functional activity, and each is surrounded by a delicate plexus of nerves and vessels.

The sacral prominence throws a large proportion of the abdominal weight upon the symphysis pubis and the recti muscles, in the support of the body, and thus relieves the pelvic basin and takes off undue strain upon the pelvic floor. The rectum is rarely entirely empty, is circular in shape, serves the digestive apparatus, in a measure, as a constantly receiving reservoir and, when not distended, may be felt as a tube curving posteriorly. It is suspended and supported, slung so to speak, by the levator ani and coccygæi muscles and fibres of the former may be found encircling the vagina. On the contrary, the vagina, entirely unlike the earlier diagrams, is flattened antero-posteriorly upon itself, and in health its walls are, when at rest, ever in close apposition. The distal end of the vagina joins with the vulva at right angles to its lateral opening at the entrance of its passage through the pelvic floor. The vulvar organs are all intimately blended with, and go to form a part of the perineum proper. On each side of the vaginal orifice are the erector clitoridis, the bulbo-cavernosus, and the transversalis muscles and these, with the levator ani, make up in large measure the pelvic floor. The bulbi vaginæ and Bartholinian glands are covered by these muscles, with their erectile plexus of vessels, abundant distribution of lymphatics and nerves. The erector clitoridis and bulbo-cavernosus muscles with the transversalis join on each side to constitute the ovate muscular vaginal orifice, and in their conjoined action perform a very important physiological function in sexual congress, often under-estimated or ignored. Their impaired function frequently underlies certain reflexive nervous conditions, distinctly pathological, which are easily overlooked, but are the cause of much suffering and unhappiness.

The much discussed, so-called, perineal body has, in my opinion, misled some of our prominent authors into false positions and caused great confusion and misunderstanding among physicians. It consists only of a juncture of the muscles that make up the floor of the pelvis which must come into union between the anus and vulvar opening to the vagina. Its most important factorage consists of the union of the opposing transversali with the anterior fibres of the sphincter ani. These are interblended in firm fasciæ of connective tissue, with some adipose tissue and are covered by external integument.

In the delivery of the head, the floor of the pelvis descends, while the neck of the bladder is drawn up, because of its loose suspensory ligament, until the occiput passes below and is allowed to escape anteriorly to the symphysis. This is not the place to enlarge upon the physiology of parturition, but the above statement is the accepted position of most recent investigators, and if this is correct, it is evident, that much of the teaching of the authors, as to the support of the perineum, is wrong. I believe a large proportion of the injuries of the perineum is caused by an honest but misdirected attempt of the accoucheur in his effort to preserve the tissues intact.

The normal vagina has a distinctly posterior curve upward from the vulvar opening and there can be no doubt the profession is indebted to Dr. Emmet in calling attention to the change from the normal curvature as a most important pathological factor. The retention of this curve is also of great importance in the proper physiological function of the rectum, as one of the earliest departures from a normal condition is the want of proper rectal support and, this being absent, the defective circulation, enervation, etc., etc., causes impaired nutrition and tone of the rectal tissues and there ensues the long train of varying pathological changes, resulting in the saccated bowel, which more or less fills the vaginal space, as a rectocele.

The following quotation is given at length from Dr. Baldy's paper, since it furnishes a clear exposition and emphasis of the views of Dr. Emmet: "The belief that the female perineum or perineal body gives any support to the pelvic viscera is an erroneous one. The distance between the uterus and the perineal body is quite measurable and the intervening tissues, which consist merely of the mucous vaginal canal and surrounding connective tissues, are by no means of such a firm character as to be able to uphold the uterus *per se* or through the support given by the perineal body below. The only way this body could give the supposed support would be by the uterus resting directly upon it. Dr. Emmet puts it very happily when he says, 'it would be as rational to assume that a man's pantaloons were supported by the legs resting on the instep or foot!' The principal support of the pelvic organs is their ligamentous attachments on the same principle as the organs contained within the abdominal and thoracic cavities are suspended. A good proof of this is that we constantly see women going about their daily work, who have their superficial or skin perineums, not including the fasciæ or muscles, torn even to the sphincter ani and who never have suffered any inconvenience therefrom and who probably never will. The cause of all the various ailments following parturition, beginning procedencias, etc., will be found inside the vagina or posterior wall. If any one will place his fingers on the posterior vaginal wall of a woman who has never borne a child, and move them first to one side and then to the other, he will find a firm resistance to pressure in any direction. If he will now introduce his finger into the vagina of a woman who has had an injury to the pelvic floor during parturition, he will fail to meet with the resistance which he met in the first case. He will find instead a *rectocele* of greater or less extent with deep diverging sulci running up each side of the recto-vaginocele, into which he can easily sink his fingers without finding much resistance, and yet the external or skin perineum may be perfect." He follows with a description of the pelvic fasciæ and the attachment thereby of its viscera, and offers it as a "clear and full understanding" of these changes. He speaks also of the transversus perinei as so unimportant that they are even of doubtful existence: "The transverse perinei, when it exists at all, arises from the pubic arch, and its fibres are lost in the sphincter vaginæ directly under the vagina." In the further analysis, as if seeming to feel after all that the injured fasciæ may not be quite the satisfactory explanation which he seeks, he attributes the results not so much to this as to the change in vascularity which ensues and that the "engorged visceræ" are the factors at fault. There results from this cause the rolling down and out of the posterior vaginal wall and, when this fails, the anterior wall must follow, etc.

Although I have the highest respect for such excellent authority, I cannot but think the explanation offered unsatisfactory and the theoretic cause unscientific. At the most, the recto-vesical fascia is the binding tissue which holds in place the various groupings of muscles described earlier in this paper and for this to be injured and not the muscles which it is their function to hold in place would be certainly exceptional. Granted that it did occur in delivery and that the muscles escaped, would it not be very extraordinary, that the rest in bed following parturition should fail to give restoration to the connective tissue, and that the muscular fixation would follow? Again, in its failure of repair, is there anything so peculiar in the vascularization of the posterior vaginal wall as to mark this as the first factor in pathological change? I cannot doubt there is some truth in this specious and special pleading, but I must think secondary changes are ascribed as primal causes, and that the practical deductions are of sufficient importance to warrant emphasis to be made upon them.

It may be accepted as conceded that the constrictor vaginal muscle is rarely torn unless the sphincter ani has been ruptured. If this is true, it follows that the very loose connective tissue holding it to its surroundings would most likely escape; with greater emphasis the rectum may be excluded. Thus we are led to the conclusion that the tissues making up the vulvar orifice are the one's likely to be involved. Although the connective tissue here is never wanting, it certainly is not the "recto-vesical fascæ" which can here be primarily involved. Thus we are forced to conclude that the tissues injured are really no other than the union of the muscles which blend in the perineal space and which go to make up the so-called perineal body. Confusion has arisen from wrong anatomical teaching. One author after another has copied the faults of older text-books until the present. The best demonstration of the perineum is often found in the illustrations offered to make clear some other anatomical point. I have collected a series of these, from the time of William Hunter, who gives us one of the best, to the present. The frozen section reproductions are among the most satisfactory. It seems to me that Dr. Savage has given in his work the most truthful dissections. Much of his work has been ably confirmed and in some points extended by Dr. Darling, of New York.

The straight muscular fibres of the pelvic floor which cross the pelvis and unite anteriorly to the anus are, so far as I am aware, almost never wanting. Had not these bundles, called the transversus perinei, a distinct and important function they had better been replaced by connective tissue, since this would have the better held as a fixed point of support. In conjunction with the erector clitoridis and bulbo-vaginæ, the transversus perinei form the group closing the vulvar orifice and with the symphysis, as one of the fixed points, the combined muscular action is to draw forward the anus, elongating the perineal space. Necessarily, the posterior vaginal curve is retained and it is not possible to have an outfolding or pouching downward of the posterior vaginal wall, even if we have a "chronic engorgement of the pelvic viscera." The physiological action of these muscles is alike important at the *inception* and *completion* of the reproductive processes.

Rupture the union of these muscles at their central attachment posteriorly and note the change. The action of the transversali now become positively detrimental. They act to pull open the vulvar orifice; the other members of the vulvar group no longer have a central point of fixation posteriorly and are rendered defective in their action and thereby aid in separating the vaginal folds. Of necessity, the faulty action comes first upon the posterior vaginal wall and hence the first factor in the long train of evils which may result and with which every gynæcologist is painfully familiar.

Interesting as is this review, it would not have been made but for its practical importance from an operative stand-point.

I agree with Dr. Emmet in his "restoration of the pelvic diaphragm," but cannot believe this is possible by restoring the recto-vesical fasciæ. I would not be understood as doubting that Dr. Emmet secures excellent results, and have been personally delighted at the dexterity and brilliancy of his operative measures. I am also sure it is equally important to restore the posterior curve of the vagina. His method of marking the extent to which the wall has prolapsed is likewise admirable, since it gives in a measure the extent of the lesion. The older and yet far too common operation which resulted in a skin flap failed to be of any service, chiefly because they did not secure and restore to union the retracted muscular fibres. I cannot help thinking Dr. Emmet's method by which he obtains his results faulty, and that its following in hands less skillful has very often an entirely different outcome. The cutting away of all the redundant tissue and closing in three lines is not only difficult and complicated, but requires many stitches, which, if interrupted wire, are not easy to introduce and are troublesome to remove. Having closed the lateral sulci by this method and thus reduced the size of the dilated vagina, there yet remains the most important factor of all, the joining of the separated perineal structures and, if the student thinks the recto-vesical fasciæ is all the fault, he may conclude with a thin perineum and leave the result much as is frequently seen to follow the introduction of the serefines which were invented to make the primary operation easy for the obstetrician. When completed in the most skillful manner, there are left three vaginal wounds difficult of aseptic treatment.* A considerable amount of tissue is removed which is better retained and put to service in securing the desired restoration of the parts to their normal condition.

Dr. Jenks, of Detroit, some years since, advocated the separation of the thin layer, usually removed, by a dissection from below upward and then, introducing the sutures as in the usual way, leaving this superficial layer to fall back as a thin folded curtain to protect the wound from the vaginal secretions. This was his avowed object of the departure and he did not indicate that it could in any manner serve in restoring the posterior vaginal curve. I consider it, however, a great advance over the complete denudation by the scissors. As a rule, all operators coapt the tissues by the use of the interrupted wire suture. A suture thus introduced, must draw in every direction towards a common centre. Since the parts enclosed usually have their longer diameter from above downward, the tension is necessarily increased in this direction. Fore-shortening of the depth of the perineum occurs and, in the instance of complete laceration through the sphincter, the tension from above downwards is so great as to make the too familiar pin-hole opening into the rectum above the restored sphincter ani.

The modifications of the operation which I have presumed to advocate and which have now been on trial for some years and tested by a considerable number of competent surgeons consist essentially as follows: The patient, in the lithotomy position, with the hips well over the edge of the table, the parts thoroughly cleansed and kept under irrigation, the operator marks the upper boundary of the everted posterior wall of the vagina and finds on either side the caruncle which shows the original line of juncture. With two fingers in the rectum, thus making the thin vulvar septum tense, a pointed, narrow knife is inserted and carried into the recto-vaginal space. This is followed by a flat, oval-shaped knife, and the dissection is carried laterally as far as is necessary to free the entire posterior vaginal wall between the limits above mentioned, and is carried down over the vulvar borders. The dissection is rapid and easy, unless old cicatricial bands extend, as they frequently do, up the lateral sulci. In denuding these, care must be taken not to open into the vagina. The dissection is carried rather deep into the lateral vulvar borders, in order to secure abundant nutrition of the separated parts. This entire flap is lifted on a tenaculum and held by an assistant.

A curved needle, threaded with tendon, or catgut is introduced into the bottom of the wound and then it is carefully carried in deep suture from opposite sides of the lateral sulci. The posterior vaginal space, being thus approximated, the same suture is continued deeply into the retracted ends of the transversali and left without extending externally. This of course is intended to remain as a buried suture and much of subsequent success is dependent upon its aseptic condition. Great care is requisite to secure this owing to the close proximity to the rectum. More recently I have threaded each end of the tendon and introduced the needles from opposite sides, thus making a modified shoemaker's double stitch. This has some advantage over the ordinary method and renders the closing knot a safe one. The parts are then held in further apposition and at rest by means of a double pin, the halves of which are nearly alike. It is made of German silver wire, gauge No. 20 or 22, because this material does not irritate the tissues and possesses stiffness and elasticity, qualities which are essential.* The end is bent in a small loop and turned one-fourth of an inch therefrom at a right angle, and the shaft is two to two and a half inches in length, and sharpened like the point of the needle of a subcutaneous syringe. The one-half is introduced from the vagina *within* outward quite deep into the tissues laterally, the direction being determined by the finger placed in the rectum to which the pin should be parallel. The other half of the pin, similiarly constructed, is introduced from *without* inward upon the opposite side in the same manner, the point of which is caught in the loop of the first part and adjusted without. Thus a kind of "safety-pin" is constructed, and when fitted to retain properly the enclosed portions, the loops are clamped down by compression forceps and the ends cut square. This holds sufficiently firm if the wire is well annealed, but may be clamped by a perforated shot upon the wire. The shot renders the end of the pin less liable to cause irritation. If properly adjusted, the elasticity of the wire compensates for the collateral œdema and does not impair the circulation in the enclosed parts, while complete approximation is obtained, and no force is exercised in the direction of the long axis of the triangle. Two pins are usually required. Upon the eighth or tenth day, as thought wise, each pin is gently pushed upwards and the vaginal end exposed. Each side is then cut off near its juncture and withdrawn. The operation is completed by a careful joining of the external wound with an over and over suture of tendon or catgut. It will be found that the infolded posterior wall of the vagina not only restores the posterior vaginal curve, but greatly strengthens the perineal union of the vulva.

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* The pins are kept in stock by Codman & Shurtleff, of Boston, and Tiemann, of New York.

As a result, it is often difficult to determine if a lesion ever existed. The pin was devised to obviate the manifest objections to the suture and is intended to act upon the tissues something as a splint, securing coaptation, retention and rest. They have been criticised as difficult of insertion, but this is not usually true. They cause much less inconvenience to the patient and are easier to remove than the wire suture.

In a number of hospital cases well selected, where the patient could be under careful supervision, we have omitted the pin, trusting to the deep suturing. At present, I do not feel safe in commending this measure to general practice, but if trustworthy this will be a manifest gain to both patient and surgeon. In the advent of the laceration being complete the dissection is made laterally, the edges refreshed and coapted, until the triangle is restored as in the first instance and the operation completed. Here the tendon carefully put in, is to be preferred to the silk suture. The suture is continuous, the rectal side first sutured, the vaginal next, then the buried suture which must secure and infold the retracted ends of the sphincter, and lastly the external side of the triangle. The pins are of much greater importance in this than in less extensive lacerations. A small pad of cotton with iodoform is introduced into both vagina and rectum and the external wound is kept dry and frequently dusted with iodoform by means of the powder blower. The urine is drawn with a catheter for some days and after the second day the bowels are kept open by laxatives. Like all other wounds, the success depends upon making and retaining the restored parts aseptic.

CLINICAL LECTURES.

NEURITIS AFTER TYPHOID; RHEUMATIC NEURITIS.

BY MORRIS LONGSTRETH, M. D., PHILADELPHIA, PENNSYLVANIA,
Physician to the Pennsylvania Hospital.

A Clinical Lecture delivered in the Pennsylvania Hospital.

Here is a patient who has been here before; a man who came in from the country; he has been living in a malarious district down the river. He was admitted on the 24th of February. It was evidently a typhoid or typho-malarial condition of a low type. We had the temperature only twice at 102°. After he was here a short time there came on an attack of erysipelas, and he had a very severe attack, with a temperature then ranging above 105°. When the blush came out on his face first it looked as much like scarlet fever as anything I ever saw. The rise in temperature took place between the seventh and ninth of the month (March). The redness continued spreading gradually, the temperature never going down except upon sponging the surface. The swelling increased and he became entirely deaf. Then he began to get better. Since the second of this month there has come on a complication of the most unfortunate character, and that is neuritis. It came on in his leg and at first we were somewhat inclined to think it was sciatica, but it has gone on down the leg and is confined to the anterior crural nerve. He got a little better and then, what is somewhat unusual, he began to complain of pain on the other side. This is a very troublesome complication which generally comes on after typhoid fever. I do not know much of its coming on after erysipelas; it is very rare for erysipelas to be followed by neuritis, so that I think this neuritis comes on after the typhoid which he had. At any rate I am inclined to regard it as a sequel to the typhoid than to think it a sequel of the erysipelas.

It is of this neuritis that I wish to speak to you this morning. It is usually limited to one nerve and does not extend all over the surface of the body. It is usually due to a congestion of the nerve rather than an inflammatory condition, and it is not attended with any rise in the temperature. The swelling of the sheath of the nerve consequent upon the congestion, causes pressure upon the nerve and this pressure causes pain. The pathology of neuritis, however, is very indistinct.

Now what are you going to do for it? Morphine? Hypodermatic injections? I must say that morphine seems to be very ineffective in these cases either given internally or by hypodermic injection. We had a case here once of neuritis where the skin was literally like a sieve, riddled with the hundreds and hundreds of holes where the hypodermic needles had been thrust in. The giving of morphine in these cases interferes, as morphine always does, with the secretions and the function of the different organs, and if it can be avoided in any way you want to avoid administering it. In some cases, of course, the pain is so great that you are obliged to give it, at least for a time, but avoid it if possible. In certain cases I have found that very large doses of iron in a digestible form brought about the cessation of the trouble as quickly as anything. We already had this man on iron and quinine, and, of course, continued them. While the iron and quinine are very great helps, there is only one thing that I know of that gives permanent relief in these cases and that is blistering; blisters applied over the seat of the pain. We have been doing this in this man's case, and here you see the method of applying these blisters. We put on a strip of blistering plaster a half an inch or an inch wide and about six inches long, directly over the course of the affected nerve and when this is taken off another is applied below the situation of the first. After the blister has drawn, we draw out the water on some absorbent cotton and let it dry there for we want the blister to heal as soon as possible; we do not want to get any irritation and therefore we want to heal it up quickly and, besides, we want to apply a blister there again as soon as we can; we only want the counter-irritation in these cases. In a case we had here of a young Swede who had neuritis in the arm, I found the only thing that seemed to give relief was to put a blister over the whole arm, and we wrapped the arm up in a strip of blister as if it had been a roller bandage we were putting on. Iodide of potash I have not found to be of any use in these cases.

Our next case, gentlemen, is this young colored man, aged nineteen. He has been living here in town as a waiter in one of the restaurants. He came here on the 9th of this month (March) and said he had pain in various parts of his body, and that he had had a distinct chill which he thought was a return of his old chills and fever from which he had suffered some time ago. He complained greatly of his head and after coming in here he was delirious for a week, twisting his head about continually and boring it into the pillow. His temperature on a few occasions was a little above 100°, but mostly it was about 99°. The pain in his head was very great indeed; even when not delirious he was all the time tossing about with the pain in his head. Intense rheumatic pains in other parts of his body gave me a clue to the matter.

At first I was in doubt about the inflammatory trouble in his brain, thinking it might be inflammation of the brain, and then I thought about cerebral rheumatism, but I have never seen this last except where there has been great inflammation in the joints or where there has been metastasis. In all these cases, however, we have hyperpyrexia, and this man's temperature was not high enough for this. Rheumatism of the scalp is almost as troublesome as rheumatic pain in any of the joints and patients with rheumatism of the scalp keep very quiet, are afraid to move their heads on account of the pain, and will not twist about or bore their heads into the pillow as this man did.

Another troublesome symptom that he had was trouble with the bladder; he was not able to pass his water and we had to use the catheter a number of times to draw it off for him. Since he has gotten better of the pain in his head we discovered a ptosis in the left eyelid. We have had here in this case a rheumatic neuritis and this is the cause of the ptosis. About the bladder, he was perfectly conscious that he wanted to pass his urine but was unable to do so. This man was always asking about having a catheter passed. We have had here a rheumatic bladder, and then we have had in addition to that a rheumatic neuritis affecting probably a good many of these nerves, but the only one that has left any effect behind is here in the nerve belonging to the muscle of this eyelid, and therefore we have the ptosis. Yesterday, or the day before, he could scarcely open his eyelids, but to-day he can open them somewhat wider and I think that the ptosis will in a short time entirely disappear. I do not think the nerve has been permanently injured. So, you see, I finally settled on the diagnosis of this case as all rheumatism.

Our treatment seemed to be clearly indicated and we, therefore, commenced with iodide of potash and gave him large doses of it. In these cases where you give the iodide you should aim to give it in as large a dose as possible, and to do this you must accustom your patient's stomach to it by beginning with a small dose and increase it as rapidly as your patient's stomach will bear it. We are now giving this man thirty grains of the iodide of potash three times a day. We have had another symptom here in connection with the bladder and that is, that he had a urethral discharge. At first I was rather inclined to think that the urethritis was the cause of his inability to pass his urine. I regarded the urethritis here as not specific but rather as a part of the general rheumatic condition. In gonorrhœal rheumatism the discharge is about over when you see the patient, but here the discharge increased as the disease became worse. This rheumatic trouble with the bladder you will sometimes see with rheumatism of the joints. We will now draw off from our iodide in this case and will watch this ptosis, and if it does not improve we will employ some method of stimulation of the nerve. It has, however, been of so short a duration that I think nothing has been left on the nerve which will permanently injure it. That will close our hour.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

EXCISION OF THREE FEET AND SIX INCHES OF INTESTINE BY KOCHER OF BERN. SUTURE OF INTESTINE. RECOVERY.

The case in question is that of a patient aged fifty-seven years, with an enormous inguinal hernia on the right side. The man came for operation eighteen hours after strangulation of the hernia. The hernial sac contained a convolution of bluish-black, partly œdematous intestine, the strangulation of which was due to two constrictions in the regions of the internal and external rings respectively. After carefully disengaging the intestine Kocher concluded to resect the gangrenous portion, and by this course happily effected a cure of the patient. A piece of intestine, one meter and six centimeters long was removed. Kocher believes that he has demonstrated by this case the justifiability of resecting gangrenous portions of intestines, contrary to the opinion of the adherents to the old method of treatment, who seek only to obtain the formation of an artificial anus and treatment of the spur-like process by means of Dupuytren's enterotome, as well as of those who recommend the secondary operation, be it after twenty-four hours (Riedel), or be it two or three weeks after the first operation (Juillard). He calls attention to the fact that the statistics which give a mortality of only five per cent. after treatment with the enterotome, fifty per cent. after excision and suture of the gut (Juillard, Madelung) do not make a true comparison, since most of the patients die from the effects of the artificial anus before treatment with the enterotome is undertaken. On the one hand, only the number of patients should be compared who survive the establishment of an artificial anus; on the other hand, those who recover after both a primary and secondary operation have been performed. With regard to secondary excision, he deems it unnecessary to wait fourteen days for complete restoration of the intestine, while he thinks the plan proposed by Riedel, of waiting twenty-four hours, perfectly proper in all cases, where, owing to existing circumstances, excision cannot be properly carried out, as for example, in private practice, in the country, etc., but thinks that all other reasons which Riedel gives for adopting secondary excision arise only from imperfect conduct of the operation. In giving the details of his method of operating Kocher holds the precaution of drawing out the intestine sufficiently far as of especial value. All doubts which may have arisen are then removed. The upper piece of intestine can now be easily and thoroughly emptied before operation, and it is then possible to see that the suturing is conducted in healthy tissues. Finally, antiseptic measures, which are carried out with difficulty in commencing putrefactive changes in the gangrenous portion of intestine, are more easily applied. When communication with the peritoneal cavity is properly cut off protection is afforded against the entrance of septic matters of decomposition as well as against the disinfecting fluid employed.

Kocher's method of treating the mesentery is worthy of observation in so far as he cuts it off squarely, parallel with the intestine, ties every spurting vessel, then leaves it take care of itself without stitching up the wound in the mesentery. Above all he warns against removing a wedge-shaped piece of the mesentery, since in this way blood-vessels supplying the neighboring portions of intestine may easily be injured and the blood supply of the latter interfered with. It is of importance that the pieces of intestine fit very easily to each other; until this is accomplished Kocher secures the ends of the entestines by means of clamps; afterwards the intestine is divided back of these, and now the ends are secured by an assistant's fingers only, or when there is lack of space the ends are held in place by provisional lateral ligatures. The intestines are united by two lines of sutures of silk of good quality. The first line of stitches, contrary to Schede and Rydygier, should consist of the interrupted suture, the second, of the continuous suture. The interrupted suture on the mesenteric, the most difficult side, is applied as an inner ring suture such as Wölfler directs in excision of the pylorus.

Kocher's case disproves conclusively the view of Baum, according to which a patient could not survive the loss of a large portion of intestine. The piece of intestine excised by Kocher exceeded by thirteen centimeters that removed by Baum. —*Centralblatt fur die gesammte Medicin*, Number XL, 1886.

A CASE OF ACTINOMYCOSIS OF THE LUNGS.

The first case in which actinomycosis was diagnosed in Hungary came under observation July 1, 1886, at the university clinic at Budapest. A woman aged thirty, wife of a butcher, sought help at the clinic against a disease the beginning of which dated back nine years but had increased very much in severity during the last two months. The woman was so reduced that she could walk only a few steps with the aid of her husband. She complains of severe pain in the right half of the chest and of much cough. The pain in the chest she has felt more or less for nine years; she states that the chest in the region of the pain was always more prominent; the cough began only two months ago at which time she was confined to her bed with what her physician informed her was pleurisy.

Her condition is as follows: The patient is emaciated; the skin and all visible mucous membranes are pale; the tongue is moist; all her teeth are carious; some partly crumbled away. In the lower half of the right mama is a fluctuating tumor the size of a hen's egg, over which the skin is slightly stretched and warm but normal in color. Near the outer side of this tumor, between the fourth and fifth ribs, a second tumor nearly double the size of the first, slightly elongated and consistent, can be felt; the contour of this changes on pressure, and the skin over it is also normal in color. When the latter region is touched the patient complains of great pain. This also is the region which has been swollen for nine years as the patient stated; while the first mentioned fluctuating tumor first appeared six weeks ago. The circumference of the thorax, on a level with the tumors just mentioned, for the right half is forty-six centimeters, for the left half, thirty-eight centimeters.

Percussion was not made as every touch of the patient created sensitive pain. On auscultation backwards between the fourth and fifth ribs, bronchial respiration and diffuse crepitation were heard. The left lung did not show any changes. During cough the patient raised a tough, yellowish sputum.

Body temperature 38.4° centigrade. The urine contains a small quantity of albumen. The patient having given herself up to the ambulance service, puncture of the fluctuating tumor in the right mamma was at once undertaken; about one hundred and fifty grammes of thick, yellowish pus were evacuated in which actinomyces colonies in the form of intensely colored, fat-like, glistening bodies the size of grains of sand or millet seed were visible to the unaided eye. The microscope confirmed this discovery and the ray fungus was also found in the sputum.

After puncture about twenty-five grammes of iodoform-glycerine emulsion were injected into the abscess cavity, but it soon refilled and had to be again opened and evacuated. The cough became milder, the sputum less, the grains of actinomyces fewer. The patient is still under treatment which is directed towards draining away the actinomycosis pus.

In this case we have to do with an actinomycosis which, as the sputum shows, originated in the lungs, spread to the pleura and finally discharged on the surface through an abscess. On the generation of the disease much light is thrown by the fact that the patient is the wife of a butcher and also, perhaps, by the fact that all her teeth are carious. It is not possible to ascertain the duration of the disease. It is hardly to be assumed that the periostitis which began nine years ago had any etiological connection with the actinomycosis.—Dr. Alexander Szénásy, of Budapest, in *Centralblatt fur Chirurgie*, Number XLI, page 705, 1886.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY WILMOT F. MILLER, CLINICAL CLERK.

RESECTION AT SHOULDER-JOINT FOR CARIES AND NECROSIS OF HUMERUS.

L. D., Allegan, Michigan, aged thirty-nine; farmer. Admitted to hospital October 11, 1886.

History.—The patient has had repeated attacks of rheumatism for the last ten years. During this period there has been almost constant pain in right shoulder. He has taken a variety of internal medicaments, and made various local applications without relief. About one year and a half ago he fell from a bridge, stricking on back and shoulders, but did not notice any ill effects from the accident. In August last he experienced a dull heavy pain at night in his right shoulder, and in several weeks two openings appeared in the right axillary space which discharged very freely.

Present Condition.—He has lost some flesh but his general health and appetite are good. The openings of two sinuses, which communicate, present in right axillary space, from which a fetid discharge constantly escapes. There is no pain in the shoulder during the day, but at night a severe dull aching pain sets in which greatly disturbs his sleep. There is only slight movement in the shoulder-joint.

October 21: Patient examined in the clinic by Professor Maclean, who probed the sinus opening on the anterior border of the axilla. The probe passed into the shoulder-joint when it came into contact with dead bone. The sinus being long and passing through the important structures of the axilla the usual mode of enlarging the sinus, and removing the diseased bone through the opening was not practicable in this case. It was determined to cut down through the deltoid to the head of the bone and find out its condition.

Operation.—The patient was placed under the influence of chloroform, and an incision made on the outer aspect of the shoulder through the deltoid into the cavity of the joint. The end of the humerus was found necrosed, and the greater part of the head destroyed and separated from the shaft. This carious fragment and one inch and a half of the shaft of the humerus were removed. A drainage tube was passed from the incision through the joint and drawn out through the anterior sinus, which was enlarged. The wound and joint cavity irrigated with bichloride solution, one to two thousand. The wound closed and dressed antiseptically.

Amount of chloroform used, four drachms; time to complete anæsthesia, two minutes; time of operation, thirteen minutes.

November 1: Presented at clinic. The wound healing rapidly. Passive movement of the arm began.

November 15: Wound continues to heal. Discharge moderate but not fetid. Motion of joint increased.

November 18: Small swelling formed below outer third of the clavicle. Dr. Sullivan opens the swelling and evacuates some pus. Drainage tube introduced into the incision and carried out through the first wound.

November 29: Quite free passive movement can be made. Sinuses not closed. Injection of iodine ordered.

December 5: Free movement at the shoulder-joint. Wounds not fully healed but closing rapidly.

December 6: Patient permitted to leave the hospital. Instructed to continue the passive movements.

HYPERTROPHY OF THE NOSE.

Chas. B., Leroy, Michigan, aged eighty; farmer. Admitted March 15, 1887.

History.—The first thing unnatural about his nose was noticed nearly five years ago. At that time a small scaly patch appeared on the side of his nose which was healed by the application of tannin. In a short time after this a swelling began to form at the same place, which has opened and discharged several times. Several years ago he applied a ligature around the base of the growth, but the pain became so severe that it had to be removed at the end of the first day.

Present Condition.—General health good. A growth the size of a large hen's egg hangs from the right ala of his nose over the mouth and chin. Other smaller growths are clustered around the margin of his nostrils. There is a small hard growth on the side of his nose at the inner canthus, which is freely moveable and has existed since birth. The scalp, forehead, bridge of nose and the cheeks are covered with an erythema interspersed with a large number of papules. There is no itching or pain.

March 17: Clinic.—Hypertrophy of the nose. The large mass with several smaller ones were removed.

March 23: Wound almost healed. Discharged.

SPERMATOCELE.

F. A. S., Detroit, Michigan, aged fifty-seven. Admitted March 8, 1887.

History.—Five years ago, at this clinic, the patient had a hydrocele tumor of the left testicle tapped and injected with strong tincture of iodine. The subsequent swelling never wholly passed away, the testicle remaining somewhat larger than normal. Four months ago it began to enlarge and is now the size of a man's fist. It is not tender and has never been painful.

November 10: Clinic.—Diagnosed hydrocele. A quantity of opolescent fluid was drawn off through a canula and two drachms of strong tincture of iodine injected, and scrotum violently shook.

Abstract of Remarks.—In the several hundred cases of hydrocele that I have used this method of treatment, this is the first that has returned to have the treatment repeated. This, however, was not a return of the hydrocele. The fluid has not the characteristic clear straw color of a hydrocele. As you see, it is milk-like, and the microscope will show it to contain spermatozoa. It is a variety of hydrocele that does not involve the tunica vaginalis, but originates from some portion of the seminal track. It has received the special name of spermatocele owing to the presence of the spermatozoa; but it is generally described in the text-books as "encysted hydrocele." In persons above the age of fifty, cysts of the testis are very common, but in the great majority of cases they remain small, and it is unusual for them to attain the size of this one. This form of hydrocele differs from the ordinary hydrocele of the tunica vaginalis from its relative position to the testis. In the ordinary variety the testis is found above and behind the tumor. In this form the testis is below and in front of the cyst. I make no distinction in the treatment. The fluid is withdrawn and the cyst injected with the strong tincture of iodine, which has given as good results in this variety as in the ordinary form.

March 11: Scrotum considerably swollen.
March 16: Swelling greatly reduced.
March 18: Discharged.

GENERAL CORRESPONDENCE.

PARIS LETTER.

PRESENCE OF PARASITES IN FIBROMA OF THE UTERUS.—PHILBERT ON A CASE OF HEPATIC COLIC IN AN OBESE PATIENT.—GLEY ON THE PHYSIOLOGICAL ACTION OF HYDROCHLORATE OF HYOSCINE.—PROFESSOR DIEULAPOY'S LECTURE AT THE COLLEGE DE FRANCE.—M. VIDAL ON THE UTILITY OF INSPECTING MINERAL WATERS.—A NEW PORTABLE MICROSCOPE MANUFACTURED BY M. DUMAIGE.—DEATH OF M. JULES BECLARD, PROFESSOR AT THE FACULTIE DE MEDECINE.

MM. GALIPPE AND LANDOWZY ON THE PRESENCE OF PARASITES IN FIBROMA OF THE UTERUS AND IN CYSTS OF THE OVARIES.

Two fibrous bodies extracted from the uterus by means of galvano-cautery, under rigorous antiseptic conditions, were carefully sterilized on the surface and cut with an aseptic knife. Fragments taken from the centre of these tumors were placed in different cultivating mediums, namely, ordinary broth, sugared and peptonized broth, peptonized and neutralized broth, human saliva sweetened and peptonized, and human saliva sweetened, peptonized and neutralized.

At the end of three days all the cultures proved to be fertile.

Examination showed the microbes to be spherical micrococci united in pairs which were found either in masses or in long chains; other micrococci of much smaller dimensions and rods either isolated or united in pairs. In both tumors, the micro-organisms had the same form, and acted the same way under the influence of the coloring reagents. When sown in tubes of gelatinized broth, they produced colors. The results of these experiments cause the authors to suppose that uterine tumors are the result of an irritation brought about by a parasite. Also, in the liquid of two cysts of the ovary, the authors have demonstrated the existence of microbes. One of these cysts was unilocular and two years old. At the end of forty-eight hours, the culture tubes were found to be fertile, the microbes showing marked vitality. The other cyst was multilocular and had existed for five years. The liquid in the larger sac was gray in color, and contained a considerable quantity of crystals of cholesterine, while that in the smaller sac was yellow and did not contain cholesterine. A direct examination of these liquids, colored by the ordinary methods, did not show the presence of microbes; it was only after three days that the tubes showed signs of their presence. In conclusion, the authors wish to point out that the etiology of tumors, both animal and vegetable, should be sought in discovering the presence of parasites, either macrobe or microbe, in the substance of the tissues.

PHILBERT ON A CASE OF HEPATIC COLIC IN AN OBESE PATIENT.

The following case of hepatic colic is reported by M. Philbert. The patient, a man aged thirty-one, had, from childhood, been affected with obesity, weighing ninety kilogrammes at the age of sixteen, and one hundred and six kilogrammes at the age of eighteen. His father, who died at the age of sixty, weighed one hundred and eighty kilogrammes. A mineral water treatment at Brides in 1883, in order to combat obesity, reduced the patient's weight eleven and one-half kilogrammes, the patient previously weighing one hundred and forty-six kilogrammes. At this time his urine contained considerable quantity of the urates, but neither sugar nor albumen. There was also considerable œdema of the legs, with slight congestion at the base of the lungs; nocturnal sweats, and continual somnolency. The patient's condition was very much improved by the treatment, which was renewed with a similar result the next year. On January 11, 1887, the patient was suddenly seized during sleep with violent pains in the epigastric region, which were followed by cold sweats and glairous vomitings. Three injections of morphine, one in fifty, were made and the pains disappeared. The next morning, it became evident that the patient was suffering from hepatic colic complicated with peritonitis limited to the region of the liver.

January 13: The patient was very much oppressed; auscultation discovered mucous and crepitant rales at the base of both lungs; the abdomen was much extended and very painful to the touch. Temperature 40.1° centigrade (104 Fahrenheit). Pulse 124.

January 14: The paritonitis had become general, the pulse feeble though frequent, the abdomen more swollen, and there were fresh vomitings. The patient could not bear cupping.

January 15: Pulse irrigular, feeble; oppression was extreme; the face was covered with cold sweat, the lips became blue, and the extremities cold, death occuring during the evening.

GLEY ON THE PHYSIOLOGICAL ACTION OF HYDROCHLORATE OF HYOSCINE.

At a recent meeting of the Biological Society, M. Gley communicated the results of his experiments on the physiological action of hydrochlorate of hyoscine. A minim of a one per cent. solution of this substance, when dropped into the eye of a dog or rabbit, produced, in seven or eight minutes, a marked dilatation of the pupil. In man, the dilatation of the pupil and the paralysis of accommodation remained nearly five days after the application of one single drop of a one per cent. solution of hyoscine. The other eye, contrary to what took place in the rabbit, was in no way influenced by the drug. M. Gley recommends the drug on account of the rapidity of its action and its feeble toxic effects. Fifteen centigrammes of hyoscine injected under the skin of a dog produced no serious accident.

PROFESSOR DIEULAPOY'S LECTURE AT THE COLLEGE DE FRANCE.

Professor Dieulapoy gave his inaugural lecture at the College de France before a large audience of professors and students. After having thanked his former masters, Peler and Jaccoud, he eulogized Trousseau, the practitioner and thinker, who foresaw the real progress of science and who opposed with such talent the doctrines of Broussais. Professor Dieulapoy then enumerated the different sections of medical science, giving the programme of his lectures and avowing his faith in that science. Pathological anatomy will occupy an important place in his lectures, may even predominate. Often, indeed, it alone can throw light on the chaos of the clinic. It is that which has enabled Professor Charcot to create a rational pathology of the nerves. But if pathological anatomy is indispensable in order to understand with what the visible symptoms coincide, symptomology ought to occupy the first place in a medical lecture, for it is that which must specially be remembered at the bedside of the patient.

Professor Dieulapoy then showed that pathology and hospital studies are closely connected, completing each other with mutual aid; that the professor ought to study them together and teach the students to reflect on the patient while studying his disease. The importance of pathology is such that the knowledge of it can alone prevent the errors so disastrous to patients, thus every student ought at once to frequent the hospitals to study it.

To enforce this Professor Dieulapoy quotes three examples of which the following is one:

A boy, aged fourteen years, has had for some months nocturnal vomitings, headache and constipation. The family doctor treats him for dyspepsia. In spite of that, the child's state becomes more serious, it is thought to be tuberculous meningitis and a consultation is held. The physician is summoned, who examines carefully the symptoms, and finds that the vomitings come suddenly, the child having no remembrance of them next morning, the cephalalgia being the only sign of the previous night's indisposition. Symptoms of epilepsy are pronounced and a careful watching of the patient proves the truth of the doctor's assertion. By questioning the parents and further study of the patient it was proved to be a slow hereditary syphilis, which, by the treatment given, was soon cured.

This illustration justifies the important place M. Dieulapoy intends giving in his lectures to the study of symptomology. He indicates the necessity of studying the etiology of disease and declares himself an adherent of bacteriology.

The students applauded this confession of faith from the pupil of Professor Peler; but some moments later they applauded M. Peler himself, who was in the hall. This extraordinary reconciliation proves at least that in this, as in other matters, public opinion is far from being fixed.

M. VIDAL ON THE UTILITY OF INSPECTING MINERAL WATERS.

At a recent meeting of the Academy of Medicine, M. Vidal read a report on the utility of inspecting mineral waters, the conclusions of which are resumed as follows:

(1) The inspection should be maintained in all its principal dispositions.

(2) A medical inspector is attached to all establishments where the waters are found to require special surveillance.

(3) In case of necessity other doctors may be added to the service in the quality of adjuncts. The object of the inspection is to watch over all things that might interest the public health.

(4) The medical inspectors treat gratuitously all indigent patients.

(5) Delegates of the consulting committee of public hygiene doing duty as general inspectors are charged with the examination of the reports which are sent to the Minister of Commerce and Industry by the local inspectors.

(6) The general inspectors should visit all of the thermal establishments in their respective districts at least once during the season. Among other duties they should give special attention to the hygiene of the locality.

(7) The doctors practicing at each station of mineral water meet once every year in committee of consultation, in order to discuss the improvements that may be introduced in the management of the springs, and other questions of medical importance interesting the station. This committee must be composed of doctors who have practiced at least two years at the watering place. None but Frenchmen or naturalized Frenchmen can form a part of this committee.

(8) The medical inspectors are chosen by the Minister of Commerce from a list of three names furnished by the Academy of Medicine.

(9) The limit of age for medical inspectors is fixed at sixty-five. The adjuncts are chosen by the Minister of Commerce on the recommendation of the committee of consultation of the station, and hold their office for three years.

(10) The general inspectors are recommended by the committee on hygiene and appointed by the Minister of Commerce.

A NEW PORTABLE MICROSCOPE MANUFACTURED BY M. DUMAIGE.

The instrument manufactured by M. Dumaige possesses the double advantage of being easily reduced to a convenient size while possessing perfect stability together with all the improvements that are now applied to laboratory microscopes. M. Dumaige's microscope, when set up for use, has the appearance and size of an ordinary inclining instrument, and may be divided into two parts: the first part comprehending the pillar and the tube; the second part, the stage and the foot. The pillar is fixed to the stage by means of a screw constructed in a special manner, having four threads. By a quarter turn of this screw the stage may be fixed to the pillar. The stage is so arranged that it can be slipped down so as to rest between the branches of the foot, thus enabling the whole instrument to be reduced to a very small volume.

DEATH OF M. JULES BECLARD, PROFESSOR AT THE FACULTIE DE MEDECINE.

M. Jules Beclard, professor of physiology at the Faculte de Medecine de Paris, and *dozen* of this institution, has just died at the age of sixty-eight. M. Beclard who was successively member of the Academie de Medecine, annual secretary and perpetual secretary of this institution, was the author of a work entitled, "Traite de physiologie humaine," which is a masterpiece of science and erudition.

EDITORIAL PERISCOPE.

CORYDON L. FORD, A. M., M. D., LL. D.

The steel-engraved frontispiece which we furnish with this number of our journal is of a person who is known, respected and beloved by a greater proportion of our readers than that enjoyed by any other individual, and they will be gratified to know that a large oil portrait of this eminent anatomist and revered teacher has recently been presented to the University of Michigan by the students of the Departments of Medicine and Surgery and of Dental Surgery.

The following sketch of Professor Ford was prepared by his esteemed colleague, Professor Alonzo B. Palmer, for the *Magazine of Western History*.

The following biographical sketch written by a friend and associate of many years, is of no common man. It is not of one only locally known, for whom a wider notoriety is sought—not of an aspiring practitioner of a profession, with the view of advertising his business, but is the brief history of the rounded life of a venerable and widely known teacher in a great profession, who has attained more than a national reputation, who is admired and revered by thousands of his former pupils, scattered in almost every city and hamlet in the land, and in many foreign fields of professional and missionary labor, who will be interested in an account, however incomplete, of one they regard as a personal friend, to whom they are bound by ties of gratitude and affection.

Neither are Professor Ford's life and labors devoid of historical interest, as he has been connected with a number of important professional colleges in the east, and has had a prominent part in contributing to the success and establishing the reputation of an important department of the largest institution of higher education and technical learning in the expanding and enterprising west.

In other respects the history of Professor Ford's career is important. It illustrates the triumphant mastering of adverse conditions by labor and perseverence; and more interesting still, it shows the great advantages of an almost exclusive life-devotion to a special field of labor, to which peculiar talents are adapted.

These points will be made to appear as the narrative proceeds. This narrative, though so important in its lessons, can be briefly told.

Dr. Ford is strictly of New England origin, being the seventh in descent from William Ford, who at the age of seventeen arrived at Plymouth in the "Fortune," the second ship that brought passengers to New England.

His father, Abner Ford, born near the border of Massachusetts, in Canaan, Columbia county, New York, early removed to Lexington, Green county, in the same state, where the subject of this sketch was born August 29, 1813. He was the third son of Abner and Catharine (Frint) Ford. When he was less than two years old his parents removed to Butternuts, Otsego county, and soon settled upon a farm near the village of Gilbertsville, where they remained until 1836, when they removed to Michigan and settled in Wayne county, where his mother died in 1856, and his father in 1860. His family belonged to the respectable class of moderate farmers, abounding in the inferior part of the state of New York seventy years ago, so many of the descendants of whom, emigrating to Michigan and other northwestern states, have given character to the society and institutions of these states.

During his childhood Dr. Ford had an attack of what physicians call infantile paralysis, affecting, as is most common, one of the lower limbs, arresting, to a greater or less extent, its development and impairing or destroying its usefulness. The results of this disease are generally permanent, and this case was not an exception. Dr. Ford has had a life-long lameness, being unable to walk without a cane, valuable specimens of which have been presented to him by classes of his students on various occasions. This defect has an effect upon his whole organism, so much so as to lead him to regard himself as an invalid for life, and has doubtless had an influence in keeping him from the practice of medicine, and confining him to teaching a fundamental department of the profession.

The resources of a moderate farmer at that period and locality were not large, opportunities for a liberal education were not abundant, and, until he was able to earn money for himself, he had only the advantages of the common schools of his neighborhood, which he attended in the winter, while in the summer and during vacations he performed such labor upon the farm as was possible without much walking. He, however, must have improved well the opportunies of education he had, for at the age of seventeen he commenced teaching school, and immediately showed such an aptitude for communicating knowledge to others, that he was saved being put to learn a light mechanical trade, which at an earlier period was thought of. Had it not been for his lameness, he might have been simply a tiller of the soil, and had he not early shown an unusual capacity for teaching, he might have spent his life as a mechanic, either of which occupations, though honorable and useful, would have deprived the profession of medicine and the science of anatomy in this county of what many have reason to believe its most successful teacher.

At the age of nearly twenty-one, he commenced the study of medicine with Dr. A. B. Brown, of Somerset, Niagara county, New York, but soon removed to Medina, of that state, and became a student with Dr. Caleb Hill. His medical studies were soon interrupted to earn money for necessary expenses, which he did by resuming his favorite occupation of teaching. His various experiences convinced him of the need of a higher grade of literary education. Before resuming his medical studies he entered the Canandaigua academy, where he pursued the study of ancient languages, and laid a foundation to be built upon as he had opportunity afterwards. When he left the academy he resumed the study of medicine, this time with Dr. Edson Carr, of Canandaigua, then one of the most prominent practitions in western New York. His acquaintance and friendship were kept up with Dr. Carr to the time of his death, many years after; and not long after Dr. Ford's connection with the University of Michigan, Dr. Carr, through his interest in his friend, made a donation of his collection of pathological specimens of much interest and value to the institution, which is now in the museum of the college.

In October, 1840, when he was twenty-seven years of age, he entered Geneva Medical College, where he enthusiastically pursued the study of the different branches of medical science under the instruction of the eminent men who were members of the faculty. Dr. James Webster, the professor of anatomy, by his great skill, expertness, and enthusiasm, in his department, excited in his pupil, who soon became his particular favorite, especial interest in that study. Dr. Webster had the unusual faculty of lecturing with fluency and at the same time dissecting with great rapidity, displaying to his class the parts and tissues in their natural positions and with their proper connections. It was said that his dexterity had more than the interest of a slight-of-hand. His favorite pupil, while learning the sciences, found himself able to imitate his teacher's method, and by the many years of study and practice which followed, the pupil came to surpass the master. During his pupilage in college, his practical apprenticeship went on in assisting Professor Webster in his work for the class and in the museum, and on the day of his graduation, January 25, 1842, he was appointed demonstrator of anatomy in the college, the duties of which office he performed for the next seven years.

On the organization of the medical college in Buffalo in 1846, he was made demonstrator of anatomy there. For three years, it would seem, he performed the duties of demonstrator both in Geneva and Buffalo colleges, and during this time often gave lectures in the place of the professor, and with such success and satisfaction to the classes, that his reputation as an expert teacher of anatomy became firmly established, and in 1849 he was invited to the professorship of anatomy and physiology in the medical college at Castleton, Vermont. He continued to lecture there with the greatest acceptance, and after he had other appointments, until the civil war occurred, when so many professors and students joined the army that the college was closed.

In 1854, his character as an unusually skillful and successful teacher of anatomy being further known, he was invited to the professorship of his favorite branch in the department of medicine and surgery in the University of Michigan.

Here his longest and greatest professional labors have been performed. His superior skill and expertness in dissecting, his precise and systematic manner of arranging and presenting his subject, the clearness and force of his language, the earnestness, geniality and enthusiasm of manner, have made him a great favorite with the large classes that for more than thirty years have here attended his instructions, and with his labors elsewhere have made his name familiar in every part of the land.

Although since his appointment, in 1854, his chief labor has been in this state university, he has performed the duties of professor of anatomy successfully in four eastern colleges. The anatomical work in the university has continued from October 1 to the last of March, while the sessions in the other colleges in which he officiated were in other months. This arrangement enabled him to continue his work in the college at Castleton till its close in 1861.

In 1860 Dr. Ford was appointed professor of anatomy in Berkshire Medical College, at Pittsfield, Massachusetts, an institution which, though no longer in existence, enjoyed much popularity in its day, and has numbered in its faculty such well known teachers as Drs. Childs Palmer of Vermont (who lost his life there as the result of an accident in his chemical work), Willard Parker, Alonzo Clark, Charles A. Lee, William Warren Greene, Paul A. Chadbourne, Horatio R. Storer, William P. Seymour, Pliny Earle, and others, who have left their impress upon the medical profession of the country. The course of instruction in that school was given in the summer and autumn, and Dr. Ford continued his connection with it until its close, in 1867.

Dr. Ford's sojourn in Pittsfield was one of the most eventful of his life. Previous to this he had not married, and, from his occupation in so many places, had no fixed and permanent home. Here he made an acquaintance which resulted in his marriage to the widow of Nathaniel Messer, the only daughter of the late Ichabod Chapman, a native of that town, which is well known for the intelligence and social refinement of its people, and this happy union changed the tenor of his social and domestic life.

In 1864 he accepted an appointment to the chair of anatomy in the Medical College of Maine, so long established and successfully conducted in connection with Bowdoin college, at Brunswick. This position he held, giving his course after the close of his lectures at the University of Michigan, until 1870, when he resigned and spent the summer in Europe.

In 1868 he accepted an appointment in Long Island College Hospital, in Brooklyn, New York. Here he continued to give an annual course of lectures after completing his labor at the university, until the present year, 1886, when he assumed the position of emeritus professor of anatomy in that college, which his labors had greatly aided in establishing; and in the future he proposes to give his whole time devoted to teaching to the field of his largest labors—in the University of Michigan. Here, in addition to lectures to the medical class, he gives a special course in the dental department on subjects of more direct interest to the students in that school.

During much of the time of his connection with the university, he has given instruction in physiology as well as anatomy, blending the two together, describing the function of each organ in connection with its form and structure.

In this manner he combined physiology with anatomy in Castleton, Berkshire and Bowdoin colleges. In 1861-2, when the professor of surgery was absent for a large part of the term in the army, Professor Ford gave most of the course on surgery, which his perfect knowledge on anatomy enabled him to do with great satisfaction to the class, and in all his anatomical lectures and demonstrations the surgical and medical relations of the parts always receive particular attention, enhancing immensely the value of his teaching.

The fact that the services of the subject of this sketch have been so extensively sought by medical schools, is evidence of the superiority of such services. The cause for such superiority is to be found in his natural capacity, amounting to a genius for the work, and in giving his whole time and energy to the work assumed. His perception of form, of structure, of position, and of the relation of parts of the physical organism, is phenomenally clear and vivid. His faculty of grouping facts in the most natural order, and showing in the clearest manner their relations, and of satisfying the judgment as to the propriety of such arrangement, and thus to captivate the imagination and thoroughly interest the student, is remarkable. His ready use of descriptive language, the correctness and force with which he expresses the facts, however dry in themselves; the manner in which he throws his personality into the work, the sympathy he excites in the class, and the force of his contagious enthusiasm, add greatly to the effectiveness of his teaching.

The writer of this sketch has been associated with Dr. Ford during the whole period of his labors in the University of Michigan, and also in a large portion of his work in the Berkshire Medical College, and the Medical School of Maine, and therefore has knowledge of what he writes. He has also had opportunities of comparing the manner of his associate with that of others of the most distinguished teachers of anatomy in our own and other countries. Some of these especially devoted to anatomical pursuits, have made original investigations, written much upon the subject, and largely extended the boundaries of knowledge. This, Dr. Ford has not so much attempted to do. He has, however, not omitted the study of general, comparative, and transcendental anatomy; but his chief life work has been to teach students the well known facts of human structure, and in this work it is not exaggeration to say he has certainly had no superior, and many, capable of judging, believe he has had no equal.

Though he has not written extensively on his subject, what he has written has been directed to the aiding of students in mastering the well known facts of the science.

His "Questions on Anatomy, Histology and Physiology, for the use of Students," is a work admirable for its purpose; and a like system of "Questions on the Structure and Development of the Human Teeth for Dental Students," has the same excellent qualities.

He has also printed for the same, "A Syllabus of Lectures on Odontology, Human and Comparative," which is highly prized.

His industry and skill are shown in the valuable anatomical museum in the medical college, mostly the result of his labor; and since the organization of the dental college, he has prepared and accumulated a valuable collection in that special branch of study.

The delicacy and sensitiveness of Dr. Ford's organization, the pain and suffering to which he has always been subject on slight exposures and provocations, and the sense of insecurity in movements, consequent upon his life-long lameness, have produced an habitual degree of caution bordering on timidity, and caused him sometimes to look upon the darker rather than upon the brighter side of human life and prospects; but he has feared nothing more than to do wrong, and his caution has prevented a resort to anodynes for the relief of his frequent sufferings, as he knew how readily a habit might be formed which in the end would be disastrous. He has most wisely avoided indulgence in opiates, alcoholics or tobacco.

By his temperate and careful mode of living, although, as the dates show, he has passed his "three score years and ten," yet it may be said with almost literal accuracy, his age is not dimmed and his natural (accustomed) force is not abated. Such preservation under such circumstances is again phenomenal. His physical infirmity and suffering have not made him misanthropic, and his study and observation of secondary causes in nature have not obscured his perception or prevented his acknowledgement of the Great First Cause, which has established the laws governing all. His religious faith, though not obstrusive, is not concealed, and his church relations have, from an early period of his life, been maintained.

Dr. Ford's scientific attainments and his skill as a teacher have not been without recognition from honor-conferring institutions. In 1859 he received the degree of A. M. from Middleberry college, and a few years ago the honorary degree of LL. D. was conferred upon him by the institution that knew him best—the University of Michigan.

The privilege of bearing this testimony to the character and labors of an associate and friend has been but "a labor of love," and will be received as the simple truth by those who know the subject of this sketch.

CHEMISTRY OF TYROTOXICON.

Professor Vaughan is assiduously investigating the chemistry of tyrotoxicon; and while the work is by no means completed, he has published in the *Medical News* the following results, which are of interest:

Mr. F. G. Novie and I have been engaged in the study of the chemistry of tyrotoxicon, and while we have by no means completed our work, we have reached some results which may be of interest to students of putrefaction.

Having a concentrated alcoholic solution of the poison, which we had obtained from milk, we added to it platinum chloride and began to evaporate it on the water-bath, hoping that the platinum would hold the poison and prevent its evaporation at that temperature. Great was our surprise when, as soon as the alcohol was driven off, the contents of the dish exploded with considerable violence. The experiment was repeated several times with the same result. After removing the platinum with hydrogen sulphide gas, the substance was found to have lost its explosive property.

We remembered that the diazo-compounds form explosive preparations with platinum chloride, and that they are decomposed by hydrogen sulphide; also that the same compounds give with sulphuric and carbolic acids together a deep coloration. So we tried this test with the tyrotoxicon and obtained a color which varied from a brownish-red to a cherry-red. We then made artificially some diazobenzol nitrate, and found that with the platinum salt it gave a highly explosive compound, that it was decomposed by hydrogen sulphide gas, and that with sulphuric and carbolic acids it produced a deep coloration. But there was this difference: the diazobenzol nitrate gave a green to black color; while, as stated above, the tyrotoxicon gave a red coloration.

Remembering that our tyrotoxicon was obtained by extracting an alkaline solution with ether, we dissolved some of the diazobenzol nitrate in water, added a drop of potassium hydrate solution, shook with ether, removed the ethereal layer, allowed the ether to evaporate spontaneously, and applied the color test to the residue, when we obtained the same shade of color as with the tyrotoxicon. We also found that the ether extract reduced ferric salts in the same manner that tyrotoxicon does.

The diazo-compounds decompose rapidly when exposed to the air. This I had found to be the case with tyrotoxicon. Thinking it not likely that the diazobenzol existed in the cheese and milk as a nitrate, we prepared some diazobenzol butyrate and found the crystals of this to agree exactly with those separated from the cheese, and that they decomposed with the same rapidity when exposed to the air.

So much for the chemical resemblances. From them we supposed it probable that the tyrotoxicon which we had obtained from the cheese, milk and ice-cream, consisted of free diazobenzol, some salt of diazobenzol, forming the crystals, and probably some decomposition product.

Next, as to the physiological action of the diazobenzol salts. Here I may say that diazobenzol was first prepared by Griess, who made the nitrate and some other salts. We cannot find that the butyrate or lactate has ever been studied, nor can we find that there has ever been any study of the physiological action of any of the diazobenzols.

To a large cat we gave a small bit of diazobenzol nitrate dissolved in water. In a few minutes the animal began retching, and in three-quarters of an hour she vomited freely, and later she was purged. The next day the cat was unable to take food. She was then etherized and the abdomen opened. The stomach contained a frothy fluid and its mucous membrane was blanched. Thus, not only were the symptoms identical with those of tyrotoxicon, but the post-mortem appearance was the same as that observed in cats poisoned with tyrotoxicon obtained from cheese, milk, and ice-cream.

From the above noticed facts, we think we are justified in suspecting that tyrotoxicon and diazobenzol are one and the same thing. I should have stated also that a second cat was poisoned with another extract of the diazobenzol butyrate, with the production of the same symptoms as were observed in the one poisoned with the nitrate.

Chemists will now appreciate the great difficulty that has been experienced in isolating the active agent of poisonous cheese. Again, it is altogether likely that the phenol which has been obtained by Brieger and other students of putrefaction results from the splitting up of diazobenzol during the process of distillation to which they have resorted. It has not, heretofore, been supposed that so complex a substance as diazobenzol is formed during putrefaction.

From some oysters which poisoned nearly seventy people in this State lately, we have also obtained the tests for diazobenzol. The symptoms produced by the oysters were identical with those observed after eating poisonous cheese, ice-cream, or milk. It is altogether likely that the active agent in all those foods, which when partly putrid produce the same group of symptoms, is diazobenzol, probably combined with different acids.

It should be stated that the diazobenzol is only a transition product of putrefaction, and soon decomposes itself. For instance, after the oysters had stood for a few days in a warm room, they were tested, and no diazobenzol could be found.

We are conducting some experiments with the hope of ascertaining the nature of the micro-organism which produces this poison, but are not ready yet to make any definite report on this point. We will only say that it seems to be a germ which develops best in the absence of air or with only a limited supply of air. We have inoculated two samples of milk with the same material, leaving one sample open to the air and placing the other in a stoppered bottle, and after a few days have found the poison in the stoppered bottle, but not in the open beaker, though this may be explained by supposing that decomposition goes on more readily in the open jar and the poison does not accumulate. Fresh oysters, inoculated with poisonous material and left in an open beaker, became poisonous, and the same was true of some thick custard. Though here, again, the upper layers of the oysters or custard may have prevented free access of air to the underlying portions. This matter needs further investigation, and nothing definite can be said on it at present.

Since writing the above we have obtained a precipitate of tyrotoxicon with gold chloride, which corresponds with the salt obtained by Griess from diazobenzol. It is insoluble in water, but soluble in hot alcohol, from which it is deposited on cooling. We hope soon to be able to obtain enough of this compound to make an ultimate analysis, by which we can determine the question of identity with absolute certainty.

CONDENSATIONS.

Dr. William Goodell has resigned the post of physician in charge of the Preston Retreat at Philadelphia, which he has held for twenty-two years. Dr. Joseph Price has been elected as his successor.

Chlorosis.—Niemeyer says that according to his observations "obstinate chlorosis attacks all young girls, without exception, in whom the menses have appeared in the twelfth or thirteenth year, and before the development of the breasts and pubes."

Castor Bean Culture.—Florida is following Louisiana in the attempt to make money out of the *ricinus communis*. A firm in that state is preparing three hundred and twenty acres to be planted in castor beans, and next year an oil mill will be erected.

Casts in the Urine.—Dr. Purdy calls attention to the fact, which too frequently escapes consideration, that "casts are rarely found in alkaline urine, no matter what renal lesions exist." This shows the importance of having quite fresh specimens when the test for casts is to be made.

The *Medical Standard* is the name that appears on the cover page of a new medical monthly published by Messrs. Engelhard & Company, of Chicago. It proposes to excel in all the elements of "a complete, trustworthy, practical and enterprising journal." In its high aim we wish it success.

Intubation.—Professor Da Costa states that the method of *intubation* as devised by Dr. Dwyer, of New York, is one of the greatest advances in medical science. He speaks in its favor very warmly, because while perfectly harmless in itself, it does not prevent an after-tracheotomy if such should be necessary.

A CLERGYMAN who conducted the funeral services of children who died from diphtheria, contrary to the regulations of the Board of Health of Des Moines, Iowa, has been arrested and quarantined. He appealed to the State Board of Health, and the action of the local board was confirmed.

PORTRAIT OF PROFESSOR ROBERT KOCH.—We tender our thanks to Messrs. Parke, Davis & Company for a portrait of this eminent investigator, and at the same time take pleasure to inform our readers that this firm will be happy to mail a copy of the same to any who may apply to them for it.

ETHER-SPRAY IN STRANGULATED HERNIA.—A correspondent writes to the *Medical Record* that he has used the ether-spray in several cases of strangulated hernia, one of two days' duration, with the best results. The operation was painless, and reduction occurred "spontaneously or with slight pressure."

CHARY OF MORPHINE.—The eminent Dujardin-Beaumetz says: I can assure you that the older I grow, the more chary I become in the use of morphine, for despite the marvelous properties of this alkaloid, which is by far the most active of analgesics, its dangers and disadvantages are such that I reserve its employment for exceptional cases.

CHLOROFORM IN MIDWIFERY.—Dr. Fordyce Barker says he has used chloroform almost exclusively in his midwifery cases since 1860. He maintains that chloroform accelerates labor, and the presence of heart disease is no contra-indication for its use. He never had but one case of death from post-partum hæmorrhage, and then he used no anæsthetic.

A CONVENIENT RELIABLE MODE OF MEDICATION.—A. R. Mitchell, M. D., Dean of the University of Nebraska, writes regarding hypodermic tablets as follows, namely: Convenient and reliable preparations of the more important drugs being a necessity of the profession, I deem it but justice to record my experience in the use of hypodermic tablets, which have served me well in many cases. Nearly all the solutions for hypodermic use have, in my hands at least, proved very unstable, but with solutions prepared from hypodermic tablets, I have never been disappointed. Age, I think, affects somewhat their solubility, but it has never in any case taken more than a minute or a minute and a half to effect complete solution. No abscesses, or even severe irritation, have ever followed the use of hypodermic tablets in my hands, and they now occupy a prominent place in my armamentarium. It is but just to mention that the tablets used by me, and on which my experience is based, are those manufactured by Parke, Davis & Company.

DR. HENRY LEFFMAN, editor of the *Polyclinic* (post-office box 791, Philadelphia), desires to obtain results of the new treatment of pulmonary consumption and phthisis by gaseous enemata, for publication in the *Polyclinic.* The correct therapeutic value of this method can only be arrived at by the collection of statistics, and he therefore requests any one who has administered the gas to communicate the result to him, the formula used, and any special information that may be useful.

MAY NOT INDICATE BRIGHT'S DISEASE.—Fothergill states that it is not proper to assume that albuminuria indicates Bright's disease. A medical man has no moral right to alarm a person by announcing Bright's disease merely on the discovery of albumen in his urine. It is as unjustifiable as to inform a man his house is on fire merely because his chimney is ablaze. Before saying anything to the patient the urine should be carefully searched for tube-casts, and if they are discovered, then the announcement is justifiable, but not until.

CASTRATION OF CRIMINALS.—The following is the recommendation of an enthusiastic sociologist, in the *Medical News,* who proposes castration as a means of limiting crime: The good effect of this kind of punishment upon the criminal class would be four-fold—(1) No offspring with an inherited tendency to commit crime; (2) An added terror to the punishment inflicted for breaking the laws; (3) A gradual improvement in time of the morals of the public at large; and (4) An improvement in the disposition of the person operated upon.

NEW TREATMENT FOR PHTHISIS.—A new method of treating phthisis has been proposed, as yet but slightly tried, by Professor Kremianski, who read a paper on the subject at the recent Moscow Medical Congress. The idea is based, firstly, on the fatal effect of the most dilute solution of aniline on Koch's bacillus; and, secondly, on the fact that the aniline seems to be but slightly, if at all, poisonous to the human body. Professor

Kremianski proposes to introduce aniline into the lungs, and, indeed, into the circulation generally, by inhalation, so that the phthisis bacilli should be bathed in a very dilute solution of aniline wherever they may be. This, he thinks, would kill them, and render even the pulmonary cavities free from bacilli, so bringing them into the condition of healthy granulating ulcers, which may be expected to cicatrize.

PERSISTENT NOSE BLEED.—In persistent hæmorrhage from the nasal cavity, plugging of the posterior nares should not be done until an attempt has been made to check the hæmorrhage by firmly grasping the nose with the finger and thumb, so as to completely prevent any air from passing through the cavity in the act of breathing. This simple means, if persistently tried, will in many cases arrest the bleeding. The hæmorrhage persists because the clot which forms at the rupture in the blood-vessel is displaced by the air being drawn forcibly through the cavity in the attempt of the patient to clear the nostril.

FACULTY OF MEDICINE AT JOHNS HOPKINS.—The plans of the Johns Hopkins university have always had reference to the establishment of a faculty of medicine whenever the Johns Hopkins hospital should be completed. The buildings are nearly ready to be occupied, and arrangements will be perfected for instruction in medicine and surgery. Meanwhile courses preliminary to the study of medicine, especially in physics, chemistry and biology, with the modern languages, are provided in the philosophical faculty. The nucleus of the medical faculty, as now constituted, includes the president of the university, a professor of pathology, a professor of physiology, a professor of chemistry, a lecturer on hygiene, and an associate in pathology.

IMPORTANT MEDICAL PUBLICATION.—We have received information from Messrs. Lea Brothers & Company, of Philadelphia, that the first volume of "The American System of Gynæcology" is now well through the press, and may be expected shortly. For some time this work has figured among the more important announcements made by this well-known medical publishing house. Numbering among its contributors such prominent authorities as Professors Barker, Battey, Engelmann, Garrigues, Goodell, Reeves Jackson, Lusk, Munde, Reamy, Thomas, Van de Warker, etc., it will certainly present a thoroughly satisfactory and complete statement of the science in its most recent aspects, and we feel justified in congratulating the profession that what has been peculiarly an American specialty is about to receive from American hands the literary tribute due it.

NEW PUBLICATIONS.

NEW MEDICATIONS. By Professor Dujardin-Beaumetz, Member of the Academy of Medicine and of the Council of Hygiene and Salubrity of the Seine; Physician to the Cochin Hospital; Editor-in-Chief of the *Bulletin General de Therapeutique*, Paris, France. Translated by E. P. Hurd, M. D., President of the Essex North District Medical Society; Member of the Massachusettes Medical Society, and of the Climatological Society; one of the Physicians to the Anna Jacques Hospital, Newburyport, Massachusets. With Appendices and Illustrations. In Two Parts. The Physicians' Leisure Library. Complete, $2.50. Single copies, 25 cents. Detroit: George S. Davis, Medical Publisher.

This work comprises the lectures known as the Cochin Hospital lectures, delivered by the author for the year 1884–'85. His first lecture is devoted to the great therapeutic discoveries of the past fifty years. The first in importance are for the relief of pain: anæsthesia, the application of chloral, and the use of hypodermic injections; to these he adds the bromides, the iodides, antiseptics, and salicylic acid.

On new cardiac medicaments he considers three: convallaria, caffein and trinitrine. He does not find convallaria reliable, but regards it perfectly safe to employ at such times when the administration of digitalis is suspended. Caffein is regarded one of the best tonics of the heart, and in the last stages of cardiac affections it is considered superior to digitalis. Trinitrine (nitro-glycerine) is considered only of use in diseases of the aortic orifice.

"Three curative measures," in treating stomach diseases, which are comprehended under the heads: *lavage*, or washing out the stomach; *gavage*, or forced feeding, and the use of meat powders in the alimentature of the sick. In gastro-intestinal medications, the "new gains" to which the author calls attention are: (1) The application of electricity to the treatment of diseases of the stomach and intestines; (2) To enteroclism; (3) To alimentary lavements; (4) To anæsthesia by the rectum; (5) Lastly, to a new remedy said to be curative of hæmorrhoids, the hamamelis virginica. In concluding new gastro-intestinal medication Professor Dujardin-Beaumetz devoted an entire lecture to "Anteseptic Intestinal Medication." For rectal and colic asepsis by means of enemata he regards few antiseptics free from danger on account of the irritant and toxic actions of most of them. Salicylic acid, boric acid and cupric sulphate, are but slightly irritating and toxic, but that which succeeds the best is pulverized charcoal from poplar wood suspended in water. For disinfection of the entire intestinal tract carbon-bisulphide water is prefered to all others:

In the consideration of new pulmonary medications, mechanical apparatus for the treatment of diseases of the thorax are described and their uses indicated. For asthma the new remedy, eupherbia pilulifera, although inferior to iodide of potassium, is highly recommended in cases where the latter cannot be borne, and for catarrhal affections of the lungs terpine and terpinal are found agreeable substitutes for copaiba. Regarding antiseptic pulmonary medication, which has for its object the destruction of the tubercle bacillus, the author concludes that all experiments go to show that the tuberculous element offers an extraordinary resistance to all antiseptic agents and that, in order to destroy it, you must at the same time destroy the living tissues which are its habitat; but that it would be premature to admit that in man the bacillus of tuberculosis resists all our therapeutic measures. Upon the subject of parenchymatous injections, he thinks the results thus far have been uncertain and that these injections are liable to be more dangerous than useful.

On account of their toxic and debilitating action on the heart tartar emetic, digitalis, aconitia and veratria should be discarded from the antithermic medication. Quinine, salicylic acid and phenic acid are harmful and dangerous and are to be abandoned as antithermics. Resorcin is an irritant and also a poison; kairin destroys the hæmoglobin and profoundly alters the blood; thallin acts similar to kairin; antipyrine is regarded the best and least dangerous of our antithermics.

Among the new hypnotics two deserve especially to be studied—chloral and paraldehyde; of new analgesics—aconitia and gelsemin; of local anæsthetics—carbonic acid and cocaine. Upon all medicaments discussed the author spoke from a personal knowledge obtained from experimentation and clinical observations.

Dr. Hurd has done the American profession a lasting favor in translating this valuable work, and the publishers have issued it at so nominal a price that no physician can afford to be without a copy.

A LABORATORY GUIDE IN URINALYSIS AND TOXICOLOGY. By R. A. Witthaus, M. D., Professor of Chemistry and Physics in the Medical Department, University of the City of New York. Professor of Chemistry and Toxicology in the Medical Department, University of Vermont; Professor of Chemistry and Toxicology in the Medical Department, University of Buffalo; Professor of Pharmaceutical Chemistry in the Department of Pharmacy, University of Buffalo; Chemist to the city of Buffalo; Chemist to the New York State Dairy Commissioner; Member of the American Chemical Society, and of the Chemical Societies of Paris and Berlin, etc., etc. New York: William Wood & Company, 57 and 58 Lafayette Place, 1886.

As the title indicates this work was written, and printed in the style and form, for use in the laboratory. It is of convenient size, opens tablet-form, and provides alternate blank pages for notes. It covers the qualitative analysis of urine, considering its physical and chemical characters, normal and abnormal; the quantative analysis of urine; urinary deposits; analysis of calculi; detection of poisons. The "guide" is written for the beginner in urinalysis whether student or practitioner; yet, its admirable arrangement makes it a useful companion to those not unfamiliar with the chemistry and microscopy of the urine.

BRIGHT'S DISEASE AND ALLIED AFFECTIONS OF THE KIDNEYS. By Charles W. Purdy, M. D. (Queen's University), Honorary Fellow of the Royal College of Physicians and Surgeons, Kingston; Member of the College of Physicians and Surgeons of Ontario; Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic; Member of the Chicago Academy of Sciences; Member of the Illinois State Microscopical Society, etc., etc. With New and Original Illustrations. 8mo: two hundred and ninety-five pages. Cloth, $2.00. Philadelphia: Lea Brothers & Company, 1886.

The author of this book is well known to our readers as a careful investigator and conscientious student of renal diseases. His object in writing the work "is to furnish a systematic, practical and concise description of the pathology and treatment of the chief organic diseases of the kidneys associated with albuminuria, which shall represent the most recent advances in our knowledge on these subjects." Dr. Purdy has accomplished his object, and has given the profession a valuable work on this class of disorders. He does not consider scarlatinal and puerperal nephritis under the common head of acute nephritis but devotes to each a separate chapter. In the first chapter the subject "albuminuria" is taken up, which is dealt with under two divisions: (*a*) extra renal, or false, albuminuria; (*b*) renal, or true, albuminuria. The different forms of albumen are briefly considered, but he believes these intermediate modifications of albumen point rather to morbid conditions outside of than in the kidneys themselves. He considers the potassio-mercuric iodide, and the picric acid the most sensitive of the recent delicate tests offered, but does not regard any test perfectly reliable, and states that it is his habit in cases when doubt arises to submit the urine to each of the five tests which he recommends. Dr. Purdy ranks diet first in importance in the hygienic treatment of albuminuria.

In chapter II, "uræmia" is considered. Concerning the remarkable manifestations of this condition, the author does not assign the cause to any single element of the urine, and thinks that "the few facts we possess point strongly to the probability of several urinary elements or their derivations being concerned in the etiology of this affection." To lessen the force and to modify the toxic effect upon the system, the subcarbonate of iron in large doses—twenty to thirty grains—repeated every three or four hours, has been beneficial in relieving the headache, nausea, and other symptoms. Other measures consist in diluting the blood by means of copious draughts of fluids; hot baths by means of dry hot air; subcutaneous injections of pilocarpine in doses of one-tenth to one-eighth of a grain; muscarine, which acts not only on the bowels, but also stimulates the secretions of the pancreas, liver, salivary glands and skin may be given subcutaneously or by the stomach in doses from one-eight to two grains.

Chapters III and IV are devoted to "acute and chronic nephritis" respectively. Dr. Purdy believes that the various terms under which acute inflammation of the kidneys has been described, as tubal nephritis, croupous nephritis, paranchymatous nephritis and others, imply only part of the morbid process and pathological changes progressing in the organs and are likely to mislead the student. He describes the typical changes found in the kidneys resulting from acute nephritis, and considers the process "essentially acute inflammation involving the whole glandular structure or cortex." In the treatment of acute nephritis the following principles are given: secure as far as possible physiological rest to the inflamed organ; limit the damage progressing in the kidneys and overcome the obstruction to the performance of their function; protect the system from the consequences of the disease. The most rational means are detailed for carrying out these indications.

In the early stages of chronic nephritis two classes of cases are met. The first of these follows acute nephritis, and requires measures similar to that of acute nephritis. In the second class the approach is insidious; here iron in some form should be given persistently, often advantageously combined with nux vomica and quinine. An absolute milk diet proves most successful in some cases, though not in all. To diminish the amount of albumen tannate of sodium, fuschin, ergot, tannin and gallic acids are recommended, but Dr. Purdy has little confidence in their curative influence. In the late stages the cardiac force is to be strengthened by such agents as digitalis, adonis vernalis, alternating with convallaria majalis, and scoparius (broom). The urine rendered and maintained alkaline by the administration of citrate or acetate of potassium. The nitrites are useful if the pulse presents evidence of high tension.

Chapter V, on "cirrhosis of the kidney," contains much useful information and considerable that is new. In this disease it is of the utmost importance that it be recognized in its earliest stages. Its development is most insidious. Dr. Purdy points out that occipital headache, persistent with morning exacerbations, and diminution or complete loss of sexual desire are constant early symptoms of the disease. More urine is secreted at night than during the day, causing the patient to rise once or oftener to urinate; diarrhœa, that Dr. Purdy has noticed is peculiar, with more frequent stools at night; epistaxis is an exceedingly frequent symptom which the author has noticed in cases two or even three years before pronounced symptoms of the disease could be made out. Regarding treatment in cirrhosis of the kidneys the nitrites are considered the most valuable remedies to keep down the high vascular tension, to be employed with caution if acute uræmia be threatening.

In chapters VI and VII where "scarlatinal nephritis" and "puerperal nephritis" are considered, Dr. Purdy repeats much that was given in the chapter on acute nephritis; but gives it a special application, but he adds considerable material to the literature on these specific forms of the disease.

The remaining chapters devoted respectively to "lardaceous degeneration of the kidneys," and "cyanotic induration of the kidneys," complete the work. It has been written, perhaps, more from a clinical than from a truly scientific stand-point, which adds to its value for the practitioner. There is a positiveness of style employed that lends assurance and confidence to the reader. No physician can read Dr. Purdy's work without feeling better fortified and qualified to meet these common, yet formible, diseases.

MEDICAL DIGEST.

THE CURE OF EPILEPSY.

In the January number of the *Alienist and Neurologist*, the reporter maintains the curability of epilepsy on the following conditions:

No epiliptic can be cured who persists in the use of tobacco, alcohol or other depressing narcotic, or vicious habit, or who does not give up coffee and tea and learn to use milk and a minimum of animal food, or to use coffee and tea but very sparingly in the forepart of the day only.

He must have secured to him the habit of sleeping abundantly and quietly, avoid all sources of passionate outbursts.

His bowels should be kept uniformly regular on a laxative pill, containing aloin, colocynth and rhubarb extract, or blue mass, as indicated at night, with an eighth of a grain of extract of belladonna and a fourth of a grain of extract of conium.

The indications for the successful management of epilepsia are to put the general and whole glandular system in physiological working order, remove all sources of eccentric nerve irritation, and daily tranquilize and reconstruct the irritable cerebral centers, keeping up the treatment till all tendency to psychical or motor explosion in the cerebral centers disappears, if it takes a lifetime to do it.

The cephalic galvanization should be employed at least three times a week, with a descending and labile current, until improvement in the cerebral nerve is accomplished and confirmed. Ordinarily a four to six-cell current from a simple McIntosh battery will suffice.

He considers skillfully employed cephalic galvanization a most essential remedy for the permanent cure of epilepsia, notwithstanding it has been disparaged by those who ought better to understand its use and powers before condemning it. The same is true in his experience with its use in chorea, and all central neuropathic in which morbid irritability and a tendency to "explosive" cell action—motor or psychical, as in active mania, the paroxysms of hysteria, tetanus and hydrophobia.

He sums up the matter as follows:

When the cure of epilepsy is possible by medical means, and it is often possible to cure this disease if we treat it properly, it is necessary in every case, to adopt a plan which consists of:

(1) A judicious combination of cerebral reconstructive, con-

servators and tranquilizers of nerve force and regulators of explosive action, epilepsy being a discharging lesion—the brain of an epileptic expending its accumulated psychical and motor force during a paroxysm, much as a spring and pendulum clock expends its power by suddenly running down all at once, whenever the pendulum or regulating ("inhibitory force") is removed.

(2) The control of the cerebral vaso-motor system through persistent galvanizations (never faradizations). The galvanizations of epilepsy are with us, in some cases, an every-day affair (so to speak) for several months—short seances, but long-continued treatment.

(3) The regulation of all the patient's habits, moral, social, psychial and physical; as much so as if he were a patient in the insane asylum.

To do this the patient must be studied and treated daily for a while, and must be as well understood by the physician as a case of pneumonia or typhoid.

We cure epilepsy in this way—not always, but quite often—often enough to satisfy us well for our pains—*Weekly Medical Review.*

THE TREATMENT OF GONORRHŒA.

Caspar, of Berlin (*Berl. klin. Wchnschr.*, January 31, 1887), has found the oil of sandal-wood useful in acute gonorrhœa, when given in doses not to exceed forty drops in a day. Larger doses he has seen produce congestion of the kidneys. In chronic gonorrhœa this oil is useless; nor has he found any benefit from the use of antisceptics, such as corrosive sublimate, resorcin, carbolic acid, and permanganate of potassium, though he fully believes in the *gonococcus* of Neisser. The reasons for the intractability of chronic gonorrhœa are believed by him to be changes in the constitution of the individual, and inadequate application of the medicament chosen. Rheumatism, scrofula, and syphilis all interfere with the successful treatment of a case. The second factor, the inadequacy of application, is overcome by him by the use of grooved sounds, and the employment of lanolin as a base for his chosen ointment. He recommends the following:

Nitrate of silver (dissolved in the smallest amount of distilled water)	¼ to ½ part;
The purest anhydrous lanolin...........	35 parts;
The purest olive-oil..........................	15 parts.

This is rubbed into the grooves of the sound with a spatula;

the anterior portion of the sound is oiled, and then passed into the urethra as far as necessary to bring the ointment into the required place. The sound is left in the urethra as long as possible, say half an hour. Should the patient have a chill or suffer from much pain, should the penis become erect or the bladder contract, the sound is to be withdrawn. The operation is to be repeated every second day. This procedure is successful in a great number of cases. Some refractory cases will yield to the direct application through a hollow sound of one to ten drops of a one-to-twenty-per-cent. solution of nitrate of silver.—*New York Medical Journal.*

THERAPEUTIC PROGRESS.

PIPERINE.—This drug has been successfully used in several cases of intermittent fever, which were not cured by quinine. It was given in doses of three to five grains, repeated every hour or every two hours.

ANTIDOTE TO COCAINE POISONING.—The use of nitrite of amyl is recommended in the *Lancet* for relieving the cerebral anæmia, and that of bromide of potassium and the application of cold for the convulsions which appear to be the main cause of death in fatal cases.

NAPHTHALINE AS A VERMIFUGE.—Koriander gives children from one to three years old 0.15 to 2.0 grains twice daily; to adults he gives from 1.25 to 6.0 grains per day in powders with sugar. He has frequently noticed excellent results from naphthaline when given for tapeworm.

CONDURANGO BARK.—Dr. Riess has good effects from Condurango bark in cancer of the stomach. It appears that a remarkable increase in weight often follows the taking of this drug. One patient gained twenty-six pounds in eighty-three days; another thirty-two pounds in thirty-six days. The appetite improves, vomiting is lessened and soon allays altogether, and the pain is almost always mitigated.

SCOPOLEINE: A NEW MYDRIATIC.—The new mydriatic, scopoleine, obtained from Japanese belladonna root, is spoken highly of by Mr. Dunn in the *British Medical Journal.* He prefers it to atropine in the treatment of keratitis, corneal ulcers and iritis. When both atropine and eserine have failed in troublesome corneal ulcers, the use of scopoleine has been attended with success. He believes that in addition to its mydriatic action, it possesses some control over the vascular supply of the eyes. The strength of the solution used by Mr. Dunn is one grain to the ounce.

OINTMENT FOR CHRONIC ECZEMA.—In chronic eczema Professor Da Costa prescribed the following:

℞.	Red oxide of mercury ointment.........	ʒij.
	Sulphur ointment............................	ʒij.
	Carbolic acid...........................	gr. iij.
	Simple cerate................................	℥ss.

Sig. Apply to affected part.

EUGENIA JAMBOLANA.—The seeds of Eugenia jambolana have been tried by Dr. Kingsbury, as a remedy for diabetes, with some degree of success. In a case which had lasted for six months, and in which the patient was quite prostrate and suffering from great thirst, the administration of five grains six times in twenty-four hours for two weeks removed the abdominal thirst and hunger, and enabled the patient to get up and walk for an hour at a time.

SALICYLATE OF LITHIA.—Dr. Vulpian believes salicylate of of lithia more efficacious than salicylate of soda in cases of acute and progressive subacute articular rheumatism. Four to four and one-half, and even five grains, may be given in a day. If the improvement is not lasting one-half grain may be added to the daily dose. It may be given dissolved in water, in powder or in unleavened bread, during or after meals. The physiological effects of the drug are headache, giddiness and deafness.

APOCYNUM CANNABINUM.—The apocynum cannabinum is a perennial plant, belonging to the family of the apocynaceæ. The root contains tannin, resin, and two substances—apocynine and apocynum—having the same properties as digitalis. Dr. Rusch's attention was attracted to this plant by its valuable properties as a hydragogue in arresting serous effusions of the pleura and perineum. It is both tonic and diuretic, and is valuable in general anasarca. A decoction is made of four grains of the bark to two hundred and fifty of water, and a dose of thirty grains is given every six hours.

COLCHICINE.—According to MM. Mairet and Combemalle, this drug acts, according to the dose, either as a diuretic or a purgative. The effects produced are more rapid when colchicine is administered subcutaneously. The dose should be from two to three milligrammes to produce diuresis, and five milligrammes when given as a purgative. Colchicine increases the excretion of uric acid, and diminishes the quantity of uric acid in the blood. Its accumulation in the system, however, and its highly poisonous nature, make it necessary to use it cautiously.

TAURAT'S FORMULA FOR TERPINOL.—

℞.	Terpinol,	
	Benzoate of soda, āā........................	gr. 1⅔
	Sugar, q. s.	

M. Ft. One pill. Sig. Six to ten pills a day in pulmonary catarrh.

Terpinol is eliminated chiefly by the pulmonary surface and gives its special odor to the breath. The sputa become more fluid, their bad odor disappears and expectoration is facilitated.

ANTIPYRIN IN HEMICRANIA.—Ungar states that antipyrin is more rapid and certain in its effects in hemicrania than the salicylate of sodium. Taken in the beginning of the attack the remedy is abortive, and has a most favorable effect when the attack has developed considerable intensity. It will not relieve, however, in all cases, nor does it always prove beneficial in the same case, on repeated occasions. Fifteen grains given once, and if good effects are manifested in one hour, this dose repeated, rarely failed. In Ungar's cases it was ordered in capsules or wafers.

PILOCARPINE IN DIPHTHERIA.—Dr. Lax reports good results with pilocarpine in ten cases of diphtheria. The following is the formula employed by the writer:

℞.	Pilocarpin hydrochlorate..................	gr. ⅓ to ⅔.
	Pepsin...	gr. x to xii.
	Hydrochloric acid............................	gtt. ij to iij.
	Distilled water..................................	ʒxvijss.

A teaspoonful or tablespoonful taken in wine, and warm fomentations applied to the throat. At the end of the third day the diphtheritic membrane upon the tonsils and pillars of the fauces had disappeared. Guttmann has treated in a year and a half eighty-one cases of diphtheria by pilocarpine without the loss of a patient.

Osmic Acid in Neuralgia.—Dr. Schapiro uses the following solution:

℞.	Osmic acid	0.455 parts.
	Glycerin	14.20 parts.
	Distilled water	24.60 parts.

This solution should be kept in a black bottle, and if carefully sealed will keep for two or three weeks. For neuralgic affections five drops of the above solution are injected hypodermically near the seat of pain. In some cases the injection must be renewed, but does not produce any dangerous results.

"Salol" Pills.—We have received from the manufacturers, Messrs. Schieffelin & Company, a number of pills composed of "salol" or "salicylate of phenol." This substance was first produced by Professor Von Weuchi, of Berne, and brought to the attention of the medical profession by Dr. Sahli. By the action of the pancreatic fluid in the intestine it is divided into its component parts, phenol and salicylic acid. In an article on the subject by Mr. Moss, published in the *British Pharmaceutical Journal and Transactions*, salol is described: "Salol is a white crystalline coarse powder, rather like damp table salt. The odor is very marked, and is identical with that of oil of wintergreen, which is chiefly salicylate of methyl. When taken into the mouth a fainter impression of the smell is received on the palate, and the taste of carbolic acid is just suggested. The advantages which are claimed for salol over salicylate of soda, for which it is prepared as a substitute, are dependent first of all on its insolubility in water and the juices of the stomach, and secondly on the ease and completeness with which it is decomposed after passing the pylorus. Being insoluble in water, it is free from the repellant and nauseating effects of salicylate of soda, which some patients find so objectionable that even syncope has sometimes supervened on ingestion. Passing through the stomach unaltered, it undergoes decomposition in the duodenum, where it comes into contact with the pancreatic juice and is broken up into salicylic acid and phenol. Sahli has used 'salol' with good effects in all rheumatic affections, in chronic urticaria, in sub-orbital neuralgia, as an antipyretic, in diabetes, in intestinal catarrh, in typhoid fever, in cholera, against intestinal parasites, in catarrh of the bladder, in ozœna, in otorrhœa, as a local application in gonorrhœa, and as a mouth wash."

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ORIGINAL ARTICLES.

STATIC ELECTRICITY IN MEDICINE.

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HISTORY OF STATIC ELECTRICITY.

We owe to the ingenuity of Otto V. Guericke, the inventor of the air-pump, the first electrical machine where friction was employed as the exciting agent. It consisted of a ball of sulphur which was turned upon its axis by hand-power. An assistant grasped the ball with his hands, and, by so doing, served as a conductor for the escape of the positive electricity to the earth. This primitive affair gave feeble sparks, which could only be seen in total darkness.

Hawksbee substituted later a globe of glass for the ball of sulphur. He obtained more satisfactory sparks with the positive electricity thus generated.

Later still, glass tubes were used, with hand rubbing; and they entirely superseded the globe as generators until the middle of the eighteenth century.

In 1767, Hawksbee's original machine was revived in a modified form by Professor Boze, of Wittemberg; and for a time it came into general use. The accompanying cut of this machine is taken from the *Leçons de Physique* of Abbé Nollet.

The collector was hung from the ceiling by silken cords; and the hands of an assistant were used as rubbers upon the globe of glass.

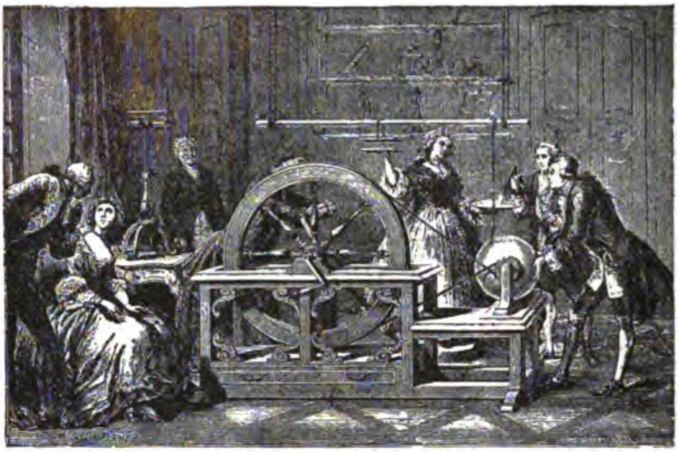

FIGURE 1.—Hawksbee's original electrical machine (from *Leçons de Physique* of the Abbé Nollet, published in 1767). The globe is of glass, and positive electricity is collected upon a conductor suspended by silken cords from the ceiling.

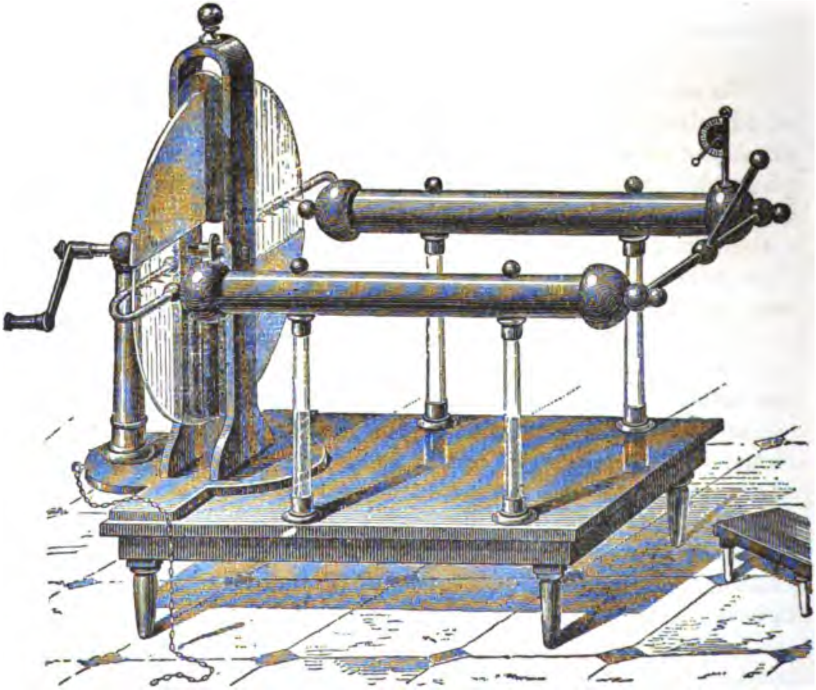

FIGURE 2.—Ramsden's electrical machine (invented in 1768). It has sector-shaped pieces of oiled silk to prevent a loss of electricity from the glass plate while passing from cushion to cushion.

In 1768, Ramsden, of London, invented the so-called "plate-machine." The glass plate was supported by wooden uprights, and the friction was made by means of two cushion-rubbers. The collectors were of metal; and two combs of metal were employed to draw off the electricity from the glass plate. The cushions were "grounded" by means of metal supports, so that the negative electricity which accumulated upon them could escape to the earth. In 1776, Von Marum modified Ramsden's apparatus so as to obviate this loss.

Nairne next modified the machine of Ramsden by substituting a cylinder of glass for a single glass plate and by adding an attachment for collecting the negative electricity by means of an insulated conductor placed in communication with the rubbers. This was the first machine that satisfactorily furnished both positive and negative static electricity.

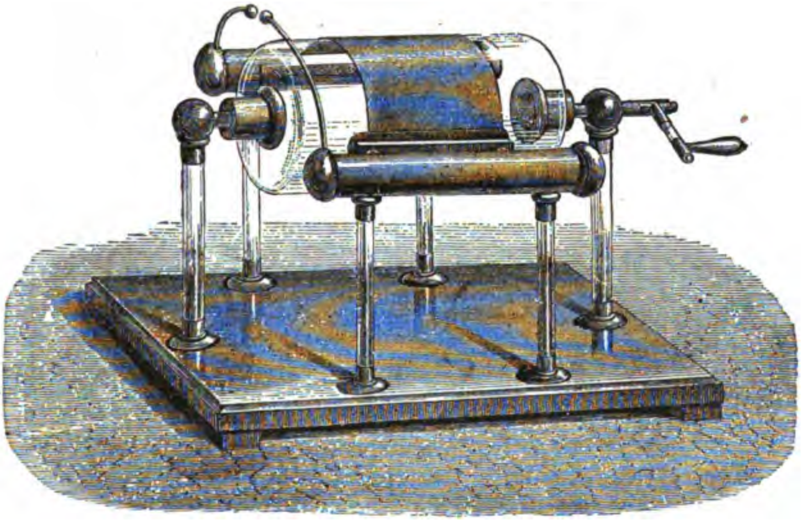

FIGURE 3.—Nairne's electrical machine. The cylinder of glass revolves between two separately insulated conductors—one attached to the rubber and the other to a metal comb.

Probably the first electrical apparatus which can properly be said to have been a true "*induction-machine*" was described as early as 1788, by W. Nicholson, before the Royal Society of London. He called it the "*electric-doubler*." It was built somewhat upon the plan of the machine now known as the Toepler-model. It had three discs, attached to a common hub. These touched upon pins of metal at two points during each revolution, and passed between two pairs of insulated metal plates without touching them. They deposited their electricity upon a metal ball, which they also passed during each revolution. This ingenious little instrument could to-day be made quite effective by slight modifications. For some unexplainable reason, it was apparently thought to be of little value, and even its existence is not mentioned by any standard author on electrical subjects with which I am familiar. A cut of the machine is published, however, together with the inventor's description of the machine, in an old work entitled the "New Royal Encyclopedia of Arts and Sciences."

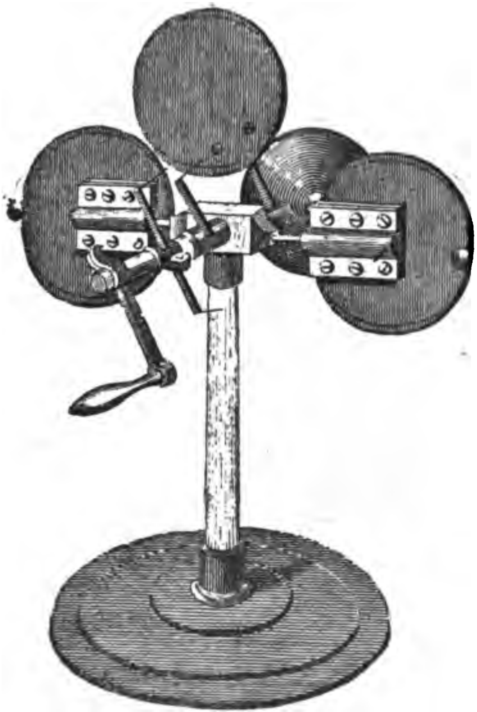

FIGURE 4.—Nicholson's "electric-doubler"—the first induction-machine invented. Reproduced from the original cuts made in the eighteenth century. The lighter portions of the cuts are made of glass.

Lane and Adams both perfected frictional machines during the eighteenth century, in connection with which the Leyden-jar was used for medical purposes. Some of the cures reported by these crude machines are fully as startling as those now obtained by improved apparatus.

In 1840, Sir W. Armstrong devised a machine by which the friction of cooled steam against the sides of minute orifices,

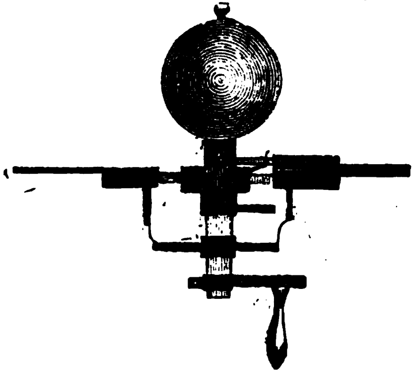

FIGURE 5.—The same machine, viewed from above.

through which it escaped under a high pressure, became the generator of static electricity. The boiler was insulated by glass legs, and became negatively electrified. The jets of steam conveyed the positive electricity and deposited it upon a metal plate studded with points, upon which the jets were directed. This machine proved very powerful, but difficult to manage, and totally unfit for general use. It made a deafening noise, and saturated everything near it. One of these machines gave a spark of twenty-two inches.

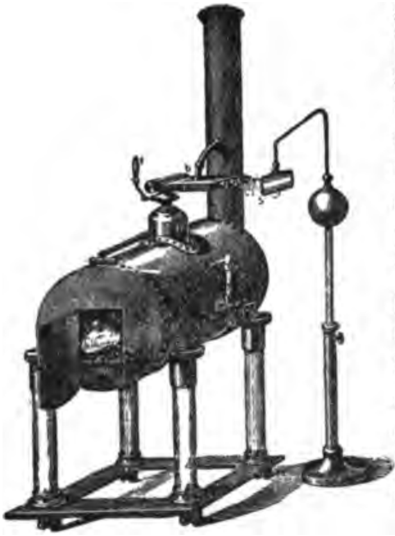

FIGURE 6.—An apparatus for generating frictional electricity by steam, devised by W. Armstrong. The legs upon which the boiler rests are of glass. The negative electricity generated by the machine when in action accumulates upon the boiler, and the positive electricity is collected by the comb upon which the steam-jets are directed.

To Holtz, of Berlin, we do not owe the discovery of the first induction-machine, as many suppose. His apparatus was not perfected until 1865. Although the original model seems crude in comparison with our present instruments, still it cannot be denied that it contained the principle which formed the starting-point of all the later improvements;

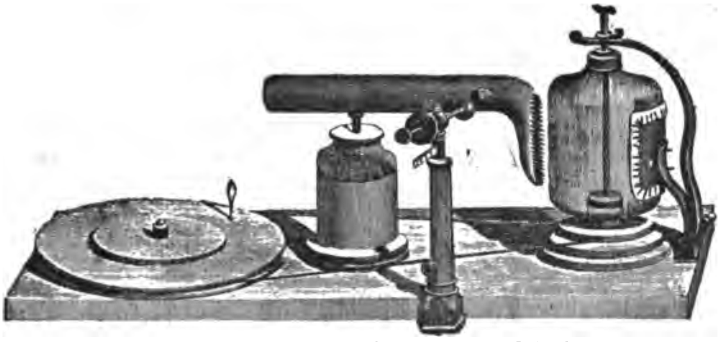

FIGURE 7.—One of the oldest models of a cylindrical static machine. The rubbers are grounded, and a Leyden-jar is connected with the positive electricity stored in the receiver.

and many of the mechanical details of the original instrument are to-day generally used.

There is a modified form of an induction-machine which is now sold quite extensively to the medical profession. It is known as the Toepler-machine, or the Voss-machine. It can be made with one or more revolving plates. The fixed plates are larger than the revolving ones, and have usually a central opening. They may, however, be divided or perforated centrally.* They are furnished with paper collectors and discs of tin-foil. The revolving plates have metal buttons attached to one of their faces. These buttons impinge upon metal brushes as the plate is revolved. The buttons rest on tin-foil cemented to the glass. The fixed plates are placed as close as possible to the revolving plates.

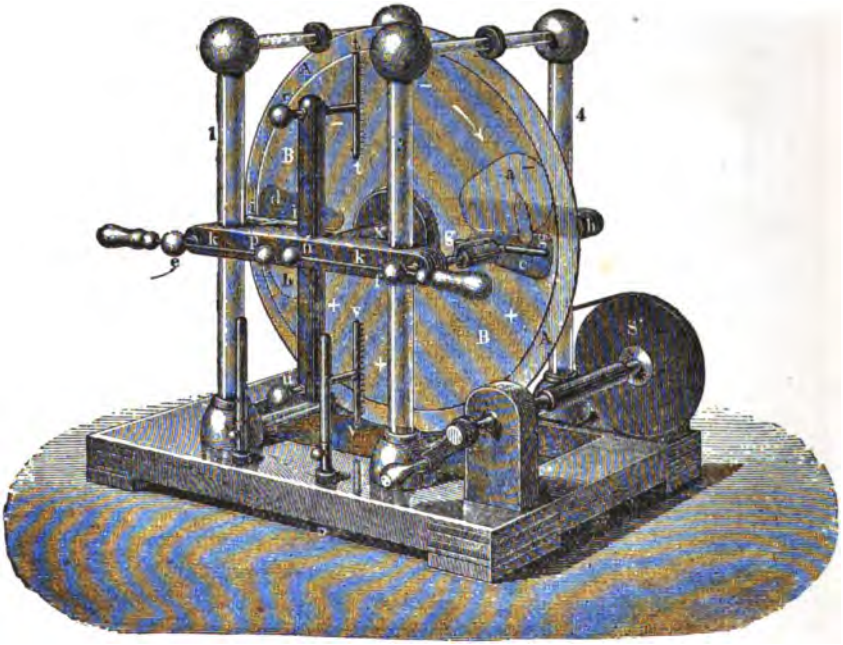

FIGURE 8.—The original model of Holtz's induction-machine with vertical plates. The same inventor also perfected a machine without windows or armatures, in which two horizontal plates revolved in opposite directions. This machine is shown in a subsequent cut.

It is claimed that this machine will work in all weathers. I have not found this to be strictly fact; although it is not as much affected by dampness as an ordinary plate machine.* This machine is usually not encased—a defect which I have remedied, with satisfactory results. It is lighter and less expensive than the improved patterns of the Holtz-model; but it is far less satisfactory in medicine, because it generates a much smaller quantity of electricity and has less intensity. The spark elicited may be a moderately long one (when compared with the radius of the revolving plates); but it is rather a thin spark at best—thus confirming the view expressed by me respecting the "quantity" generated.

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* I have lately had one so divided, which works admirably.

THE PRINCIPLES OF STATIC INDUCTION.

The application of the principles of static induction as demonstrated in the machine devised by Holtz, is difficult to fully explain without devoting more time to the general subject of electrical induction than is deemed wise. It may be roughly summarized, however, as follows:

Any body when electrified has the power, to a greater or less extent, of exerting (even through an intervening substance, which in this instance consists of a plate of glass,) a peculiar effect upon the electrical state of another body closely adjacent to it in position. It tends to draw from the opposed body that variety of electricity which it does not itself possess. Now, if an intervening substance happens to exist between the two bodies, the electricity drawn toward it by induction may be deposited upon the corresponding side of that substance; and a proportionate amount of electricity of the opposite variety is abstracted from the intervening body. Hence, the intervening body becomes either positively or negatively electrified on one side, as the case may be.

In the induction machine, the intervening substance happens to be the revolving glass plate; and the opposed bodies are the two paper collectors and the two metal combs of the machine, which are separated by the revolving plate of glass.

In all induction-machines, the charge is *practically constant when once established*—provided the mechanism be perfect and the plates kept absolutely dry. Under such conditions, it ought never to fail to produce its full effects when the wheels are set in revolution. This is a great desideratum in medicine.

In the original Holtz model only one stationary and one revolving plate were used. Both were circular in shape. The stationary plate had openings or "windows" cut in it. Paper collectors were glued to the stationary plate; so made as to project from it and to come in close contact with, and to face the openings in the stationary glass plate. The revolving plate was insulated by legs of glass, while the stationary plate was not. Metal combs were used as terminal attachments to the inner end of the two poles of the machine. They faced the revolving plate and almost touched it.

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* This opinion is supported, moreover, by the fact that some manufacturers of these machines give to their purchasers explicit directions respecting the drying of the plates.

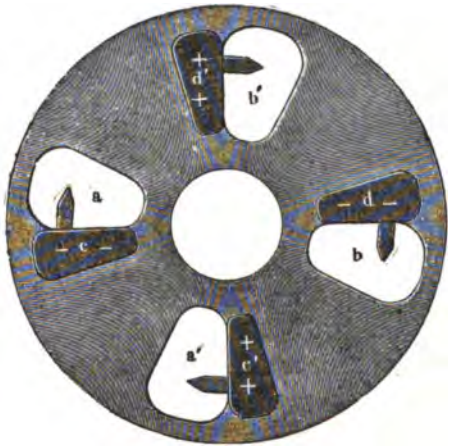

FIGURE 9.—The stationary plate of the original Holtz, showing its armatures and windows, with the projections upon the armatures.

You will find all of these mechanical features practically preserved in the improved models of to-day. The revolving and stationary plates have been increased in number; simply to augment the quantity of electricity generated. The stationary plates are no longer circular; they are made in two pieces, to allow of "windows." Two paper-collectors are glued to each stationary plate. These terminate in points which project into the "windows" made by dividing the plates. The poles of the machine have metal combs on one end, and a brass ball at the other. Extra combs have been added to draw off residual electricity which accumulates in excess; but these are "grounded."

Furthermore, the machine has been encased, simply to protect it from atmospheric changes. Cat-skin rubbers have been added. They are of use only as a means of exciting the plates when, from any cause, induction shall have ceased. We call them the "chargers" of the machine. (See Figure 11).

There have been many mechanical modifications made, from time to time, of the original model, which have not been here specified by me; but as they do not in any way affect the principle of electrical induction, they are not of importance in this connection.

In the original Holtz machine a charge was primarily effected by rubbing a piece of ebonite briskly with cat-skin until it became highly charged with negative electricity, and then applying it closely to one of the paper collectors on the stationary plate of the machine. By the "law of induction" the comb opposed to this paper collector becomes electrically excited immediately. It at once deposits *positive electricity* on the side of the revolving plate nearest to the comb, and takes *negative electricity* away from the revolving plate. Thus the revolving plate becomes *positively electrified* to a very high degree at this point.

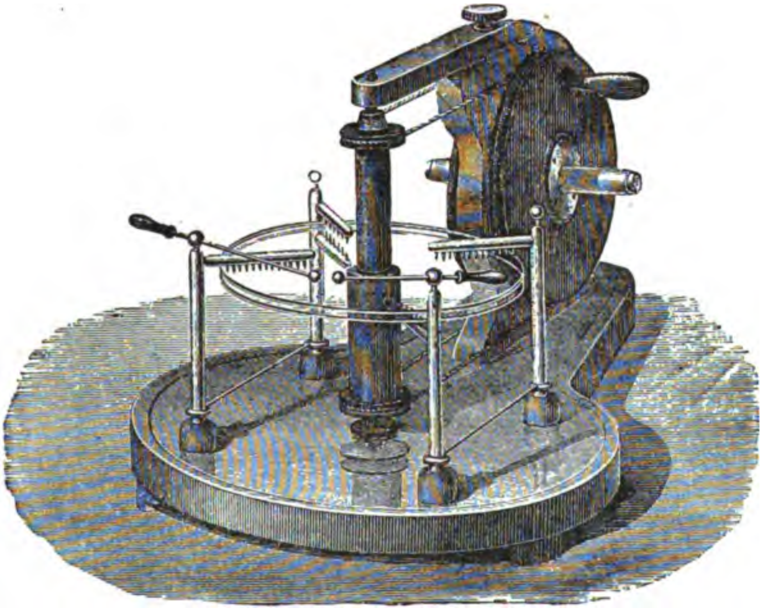

FIGURE 10.—Holtz's static induction machine, with horizontal plates. The plates have neither windows nor armatures, and they revolve in opposite directions.

Now when the wheel is made to revolve to that point where it meets the other paper collector upon the stationary plate, induction again takes place. Negative electricity is deposited, (1) by the collector on the opposite side of the revolving plate (the side nearest to the paper collector) and (2) by the metal comb; at the same time positive electricity is taken from the adjacent side of the revolving plate by the collector, and also by the metal comb, from the opposite side of the revolving plate. This interchange of electricities charges the "positive pole" of the machine.

The revolving plate (now excessively charged with *negative electricity*) goes on to the next paper collector. Here a similar exchange of electrical conditions occurs. The negative electricity is taken from the revolving plate by both the paper collector and the metal comb, and positive electricity is given to the plate in exchange from both of these sources. Hence the "negative pole" becomes highly charged.

As long as the revolving wheels are kept in revolution, this interchange of electricities continues at each of the poles; hence the accumulation at each pole soon becomes sufficiently great to allow of an escape from pole to pole in the form of a spark, or into the atmosphere as a "luminous brush" easily seen in the dark.

STATIC ELECTRICITY AS COMPARED WITH GALVANISM.

It has been computed that the *electro-motive force* of a Holtz induction machine is 52,000 times as great as that of a Daniell cell (or 52,000 volts). It is not affected by the velocity of rotation.

The *quantity* generated is proportionate to the velocity of rotation and the number of wheels employed.* It is modified also by the moisture present in the atmosphere.

The *internal resistance* of the machine diminishes rapidly with increased velocity of rotation. It is not influenced by atmospheric conditions.

STATIC ELECTRICITY IN MEDICINE.

The revival of static electricity (or Franklinism) as a therapeutical agent from the oblivion into which, for nearly half a century, it had unaccountably sunk, has been occasioned by several factors. Among these factors the following may be prominently mentioned:

(1) The awakening of the profession at large to the fact that *electrical currents of different kinds have distinct therapeutical actions.*

These are not to be attributed to or confounded with the strength of the current employed, or its method of application. The effects of faradization, galvanization, and franklinization upon animal structures differ widely in many respects. The time has come when an intelligent physician cannot justly condemn all forms of electrical treatment of any individual case, because he has failed to obtain satisfactory results with one of the above-mentioned currents alone; even if he has employed that particular form of current with the highest possible skill and judgment.

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* On this account I have lately increased the size of the driving-wheel, so as to ensure rapid revolution of the plates of the machine.

This is an error into which many are unwittingly led. I could report (if time would permit me to do so) the details of several cases where a failure to employ the proper current has proved most disastrous to patients. One instance of this character (which was happily aborted) impressed me so forcibly at the time, that it is possibly worth narrating:

A patient, who had accidentally severed the musculo-spiral nerve by a pistol bullet, was sent to me some years since for diagnosis, and to confirm or reject an opinion which had been expressed by a physician of prominence, namely, that the only hope of cure lay in a surgical operation for the uniting of the severed ends of the nerve by sutures. This opinion, as I found, was based upon the fact that the *faradaic cnrrent* had failed to produce any movement in the paralyzed muscles; and that several months had already elapsed since the accident—during which time the hand was steadily becoming more and more deformed by contracture of the flexor muscles of the hand and forearm.

My examination of the patient showed, however, that a *galvanic current* produced violent contractions of the paralyzed muscles when *passed through the injured nerve* (one pole being placed upon the sternum as a neutral point, and the other upon the musculo-spiral nerve); and the galvanic reactions of the nerve and its muscles furthermore indicated marked "degeneration" as having developed in the nerve below the point where it had been divided. Thus, the question of the advisability of an operation was decided positively in the negative. The nerve had already united.

In about eight months the injured nerve was completely restored by the use of the "static spark"; the contracture had disappeared; and to-day the patient can see no difference in the usefulness of his hands.

(2) The *improvements which have been made in machines for the generation of static currents* for medical purposes have had much to do with the revival of this method of treatment.

Some of the cases reported in the earlier encyclopædias, and antiquated works on electricity, are fully as startling as those now encountered, when treated with the improved machines; but, on the other hand, many failures to obtain good results must of necessity have occurred in olden times from the imperfect apparatus depicted in the scientific works referred to. Later, I will discuss the various improvements which have been made from time to time since Holtz first devised the present model of an induction machine (1865).

(3) *Improved methods of administration* of static currents have added materially to the effectiveness of this agent as a cure of disease. Some of these methods were unknown in earlier times (as far as my research goes to show).

(4) It is now known that a *considerable quantity*, as well as *length of spark*, is essential to the successful use of a static machine in medicine. Many of the static machines sold to-day are practically worthless, save as a toy; because they do not produce a sufficient quantity of electricity. The requisites of a static machine for medical purposes will be touched upon later.

(5) Experimentation with this agent seems to have confirmed the views of its enthusiastic advocates of the present day, and to support the accuracy of many of the observations reported in old scientific works. The incredulity of the past is rapidly being overthrown in respect to this method of treatment; and the special fields in which it proves of the greatest service are being definitely mapped out by those who are scientifically recording the results of its administration.

For the past few years I have devoted considerable attention to the improvement of the Holtz induction machine. Some of the results of my experimentation have already been published. The machine now described to you is in some respects an improvement upon the one which I originally introduced to the profession through the *Medical Record* of October 17, 1885. I have modified the charger originally used by me, so that it now bears upon the *outer revolving plates above the metal combs,* instead of passing between the central revolving plates. I have found that the application of cat-skin at this point on the outer plates awakens the machine into action (when not charged) with greater rapidity and certainty than at any other part of the machine. Furthermore, there is no longer any difficulty in making the contact between the charger and the glass when the wheels are revolving rapidly;* while, with the old charger, the springing of the rubbers often rendered their insertion between the revolving plates (which are in extremely close approximation) a matter of some little annoyance at times. This modification in the charger has entailed a slight change in the mechanism by which the rubbers are brought into play when needed.*

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* A *slight touch* of the charger of short duration upon revolving wheels, repeated at intervals of a second or two, is more effective than a long continued application to the wheels of an induction machine.

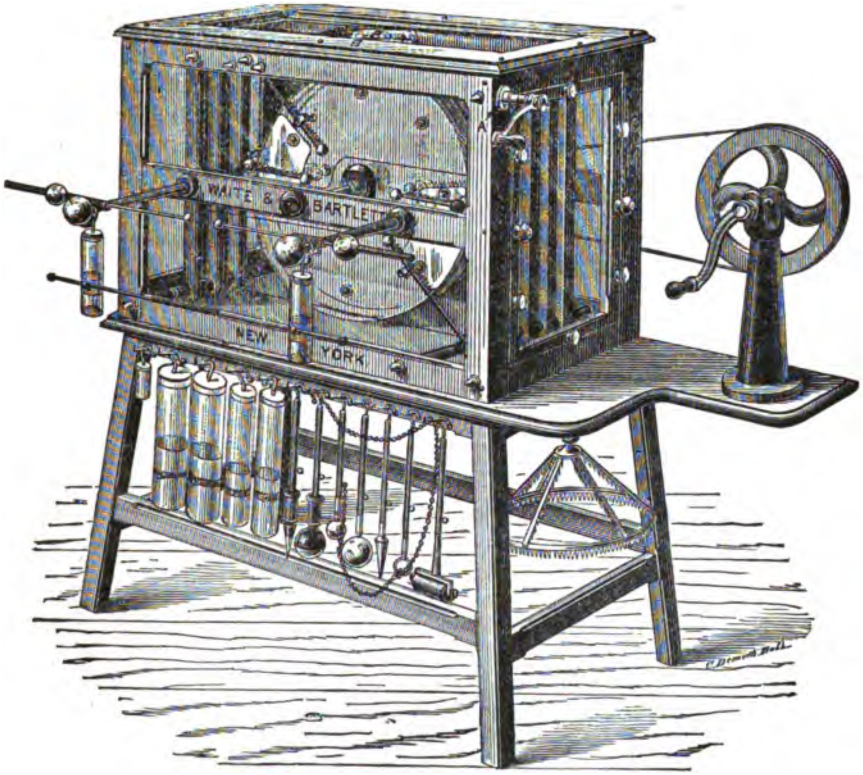

FIGURE 11.—Holtz induction machine, as improved by the Author.

Again, although chloride of calcium is not required during the cool months in this particular machine for the purpose of

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*In some models of the present day, the charger cannot be raised from between the revolving plates. This is a serious defect.

NOTE.—The following description of this machine is quoted from the author's article in the *Medical Record*, October 17, 1885:

"I would call the attention of the profession to an improved static machine which has been lately devised by me.

"It is the result of many months of experimentation, and is the outgrowth of the dissatisfaction which all other devices for generating electricity by friction have afforded myself, as well as others who have employed them. By those who have had experience with static madrying the air contained within the case (on account of the rubber-packing between all the joints of the case, which almost hermetically seals it), I have found it desirable to use this or some other means of artificially drying the plates *during the summer months*; because the air is then excessively laden with moisture. To allow of the introduction of a tray, containing chloride of calcium, without opening the doors of the case, I have been forced to modify the wood-work of the machine somewhat, and I have also raised the lower level of the stationary glass plates about two inches. By this means I can now slide a tray of nearly the whole width of the case, underneath the plates, and thus expose the air within the case to a large absorbing surface which deprives it of moisture very rapidly.

I hope in time to so perfect my system of packing the joints and the openings in the case (entailed by the parts of the machine which must of necessity perforate it), as to make it absolutely air-tight at all seasons of the year. When this feat is accomplished, the necessity of chloride of calcium* or any artificial dryer within the case will have been entirely dispensed with; but until cabinet-makers can be found who never

"chines, it is generally conceded that they are frequently charged with difficulty and give but a feeble spark during damp weather; and that they are particularly unsatisfactory and of little service during the summer months, when such conditions are liable to prevail. It is also conceded that some form of motor is generally required to run a machine of large size, because the hand is soon fatigued in overcoming the friction of the plates upon the rubbers in addition to that produced by the by the bearings of the axle, and the belt which connects the driving-wheel with the axle. Furthermore, it is now well recognized that plates of large size (16 to 24 inches in diameter), and several of them, are absolutely essential to a machine which is intended for medical use. Small single-plate machines do not give sufficient quantity or length of spark to be of any practical benefit as a curative agent. Again, it has been found by experience that building a glass case over a static machine does not thoroughly protect the plates of the instrument from dampness. No cabinet-maker can make joints of wood which will not admit of much moisture when the outside air is impregnated with it; and chloride of calcium, if placed within the case, will not absorb all the dampness that enters and collects upon the plates and metal of the machine.

"I found by experience that all the electrodes of a static machine (being insulated by glass) were liable to be easily broken; and that the poles of the instrument, when by accident exposed to outside violence

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*In several instances I have known the *chloride of lime* sold in commerce to be placed within the case of a static machine. The result has been to almost ruin the metal parts of the machine. It took a mechanic nearly a week in one instance to restore the effectiveness of the instrument.

make mistakes, or a better material than highly finished and shellaced wood[†] can be obtained from which to construct the frame-work of the machine, I fear this scheme will never be perfectly accomplished. Practically, however, this necessity is not so great as it might at first seem; because during the summer months the diffusion of static electricity into the atmosphere is so great as to seriously interfere with a satisfactory application of this agent to a patient by the methods known as "insulation," the "indirect spark," and the "static wind," in spite of a perfect generator. These methods, as well as other forms of application of static electricity, will be described later.

In other respects than those enumerated, the modified Holtz induction machine introduced to the profession by myself some time since remains practically unaltered. Its effectiveness seems to have been pre-eminently satisfactory to those who have used it, and the quantity and length of spark which can be elicited is as nearly an approach to the maximum of its theoretical quantity and power as could be hoped for.

[†] It has been computed that fifty coats of shellac-varnish are requisite to prevent the penetration of gases through stone.

" or a blow, were also liable to cause a breakage of the glass windows in the case of the machine (which they perforate in most of the later models).

" In some machines, the case is, moreover, too small for the plates and allows of an escape of more or less of the electricity generated. The first machine which I made upon the present plan had this objection. It would give the operator an occasional shock in consequence of this defect when the hand was used as a motor, and it lost a large percentage of the volume of electricity generated by "grounding" that proportion which jumped to the metal parts of the case.

" Without entering further into numerous difficulties which I have had to encounter and overcome, I may summarize the more important improvements made in the machine shown in the accompanying cut, as follows:

" (1) The case is so constructed that all of its joints are *packed with soft rubber* before its screws are tightened. This prevents the entrance of moisture from without, and makes the machine a useful one at all seasons of the year. Soft rubber now constitutes the best packing for steam apparatus, and is also used in hermetically sealing fruit jars in preference to any known material. All imperfections in the joints of the case are perfectly sealed in this instrument.

" (2) The *doors of the case* are so arranged as to be drawn tightly in contact with a frame covered with soft rubber by means of milled screws.

" (3) The glass in the case is put into the frames with putty, which is impervious to air.

" (4) The poles of the machine perforate the wooden portion of the case, instead of the glass windows. They are insulated with hard rub-

No static machine can give off a spark greater than the radius of the revolving plates. I have frequently demonstrated a spark of eleven and a half inches from a wheel of twelve-inch radius. Furthermore, I think I can justly claim to have so improved all previous models built on the original Holtz-plan, as to ensure a continuance of the charge throughout nine months of the year without recourse to artificial means for drying the plates. When properly cared for and handled, there is little necessity even for a charger during these months.

Before I pass to the consideration of static electricity as a therapeutical agent, it may be well for me to state that the cost of a static induction machine with plates of twenty inches diameter or over must of necessity be large; although the cost has been materially reduced of late by competition and improved methods of manufacture.

Again, it is impossible to transport a static induction machine from house to house without danger of breakage and the employment of a cartman; hence it becomes a part of a physician's office outfit only, and cannot be used in medical practice except by bringing the patient to the machine or going to some expense and risk in transporting it.

Finally, a static machine of the induction model requires a certain amount of care; otherwise the effectiveness of the instrument is liable to deteriorate, and its component parts to become more or less injured.

There is another form of static machine (already described

"ber, and the apertures are protected by soft rubber packing placed between hard rubber buttons and the wood. Thus the danger of breakage of the case by accident is decreased without impairing its impermeability to dampness or allowing of leakage of the electricity generated when the machine is in use, while the strength of the case is materially increased by this modification.

"(5) The axle is so built as to reduce the friction to a minimum and to allow of its being oiled without opening the case.

"(6) The driving-wheel is very large, and rests upon a cast-iron support. This insures both ease of motion and durability.

"(7) The glass plates of the machine are nine in number. Six of these revolve, and three are stationary. The stationary plates are of peculiar shape. The revolving wheels are made of carefully selected glass, so as to be as true as possible and bear evenly upon the rubbers as they revolve.

"(8) The excitants consist of cat-skin rubbers so *arranged as to touch the outer plates* when the machine loses its charge. This charger is a great improvement over all others previously employed by me. Metal buttons are also placed upon the outer plates, which as materially assist in charging.

as the Toepler model), which has been sold extensively to the profession. It has no case to protect it from the atmosphere. It can, therefore, be more readily transported, and it costs much less to manufacture than the induction model; but, on the other hand, it is far less effective, and cannot be favorably compared with the more expensive machine as a part of a physician's office outfit. The *quantity* generated by such a machine is necessarily small; and it is more or less seriously affected by atmospheric changes. In spite of the fact that some of the later authorities on electricity speak in its praise, I cannot give it an unqualified indorsement. It may serve the requirements of scientific institutions admirably; but it is, at best, but a make-shift for the neurologist. I think that I am sustained in this opinion by those who have had experience with the two models, when provided with all their latest improvements. I have been experimenting for some months to devise a cheap static machine, which patients can use at their homes, and I think I have succeeded in producing a tolerably effective instrument; but I should never advise a physician to purchase one for his own use, if he could afford to buy an improved Holtz induction machine.

A STATIC OUTFIT.

The cost of an improved induction machine of the latest pattern varies from $250 to $350, according to the size and number

"(9) The collectors have tinsel attachments which aid in gathering the electricity generated.

"(10) The electrodes are made with handles composed of hard rubber instead of glass. They are therefore less liable to be broken, and are as perfectly insulated.

"(11) Each machine is provided with three pairs of Leyden jars of different sizes. It is arranged also with hooks upon which the electrodes may be hung when not in use.

"In conclusion I would say that I have produced with the machine here described (24 inch plates), and now in my office, a spark of eleven inches in length during a muggy day in August, when most static machines would fail to charge. It runs, after a few turns by the hand, for nearly a minute without any power, and generates without interruption. Any boy of seven years of age can run it without fatigue for half an hour.

"Respecting the uses of static electricity in medicine, I would refer the reader to my lectures, lately published in the *N. Y. Medical Journal.*

"The machine here described is manufactured by Waite & Bartlett, of this city, who have been industriously occupied for several months in perfecting it under my guidance.

"The cost of this machine has been materially reduced from the schedule prices of other makers for similar instruments, rather than increased by the improvements made."

of the plates; hence this is a matter to be carefully considered before purchasing one. It is advisable, in my opinion, to have not less than six revolving and three stationary plates. The revolving plates should not be below twenty inches in diameter. I prefer one with twenty-four inch plates, for medical purposes, over those of less power.

The *attachments* which should be purchased with such an instrument comprise:

(1) An *insulated platform.* These may be made to seat one, two, or more persons at a time. I use for legs the heavy glass insulators employed by telegraph companies upon their poles. They are very strong and cheap, and have another advantage, namely, that they can be screwed up and down upon a wooden pin which perforates their central orifice. This admits of leveling the platform, in case the floor of the room has settled.

(2) A *set of electrodes.* This item comprises a large and small brass ball, a metal point, a wooden point, a roller of metal and of wood, an umbrella-electrode, some sponge-covered electrodes, a pistol-electrode, and a ring to hold the chain away from the patient during the applications. The handles should be long, and made of hard rubber or of glass.

(3) A *set of brass chains* of varying lengths.

(4) A *set of hooks* for attachment to the ends of the chains.

(5) A *set of heavy insulated rheophores* of varying lengths.

(6) *Three pairs of Leyden-jars* of different sizes. I use those of 3 inch, 1½ inch, and 1 inch diameter, respectively.

(7) A *wooden chair* or *stool* which fits the insulated platform.

(8) A *connecting brass rod,* for use when the Leyden-jars are employed.

(9) Some pieces of cat-skin.

(10) Several bottles of well-selected chloride of calcium.

THE CARE OF AN INDUCTION MACHINE.

A few suggestions of practical value may be made upon this subject.

It is advisable, in the first place, that an induction machine should be placed in a perfectly dry room, *well lighted by the direct rays of the sun*; and, when possible, in close proximity to a window which shall allow the sun's rays to fall directly upon the glass plates of the instrument. By this step we obviate dampness, and thus ensure the greatest effectiveness of the machine.*

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*I have my own in a bay-window where the afternoon's sun has free access to it.

Carbon Electrode, round end.

One and a quarter inch Brass Ball.

Brass Brush.

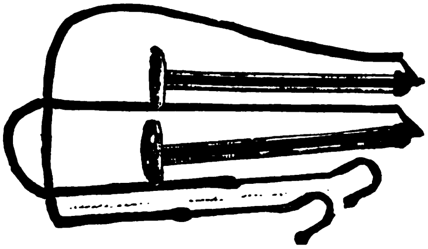
Rubifacient.

Wood Ball.

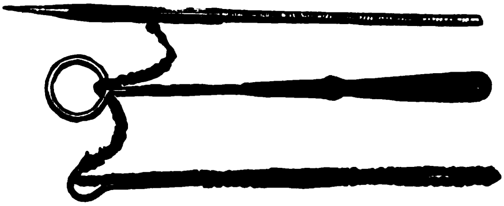
Wood Point.

Two and a quarter inch Brass Ball.

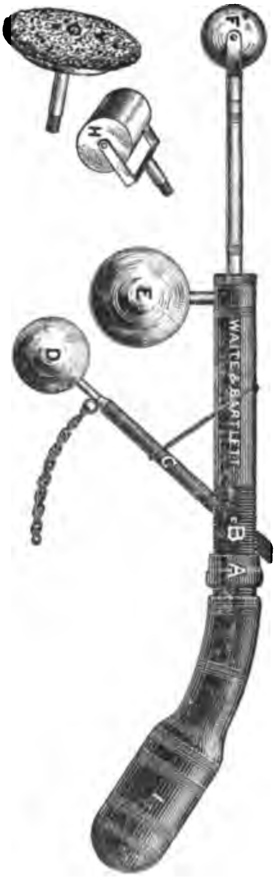
Spinal Roller for Massage.



Handles and Sponges.



Brass Point, and Chain Holder.



Morton's Pistol-Electrode.

FIGURE 12.

In the second place, the *metal parts* of the machine and the metal electrodes should be *rubbed briskly every morning* with dry chamois-skin or silk. Accumulated moisture on the poles or electrodes is a serious drawback to successful static applications.

In the third place, although the *metal parts* of the machine are shellacced when made, they are apt after a lapse of time to require *re-polishing* with emery-paper, powdered emery, or rotten-stone. A light coat of shellac varnish should be given these parts after their brightness has been restored, and all grease or moisture thoroughly removed from them.

Again, it becomes necessary, at intervals, to *oil the bearings* of the wheel-axle and the plate's axle; also to occasionally tighten the leather belt,* and to re-shellac the case if it becomes blistered by the sun. The latter step tends to exclude the entrance of moisture within the case through the pores of the wood.

During the summer months *fresh chloride of calcium should be constantly kept within the case.* It should be renewed whenever sufficient fluid appears in the tray to become evident to the eye. Unless the case is packed with rubber, this method of artificially drying the air must be employed at all seasons of the year. A few drops of petroleum on the floor of the case help to prevent the accumulation of atmospheric moisture upon the plates.

Occasionally, the best machine will lose its charge. Should it do so, you will probably find that one of the following causes has led to this result:

(1) The servant, or some inquisitive person, may have *turned the revolving plates in the wrong direction*; this causes the accumulators to lose their electrical state and thus to arrest "induction" through the glass plates.

(2) *Atmospheric moisture may have entered the case* and been deposited upon the plates. In all models that I know of, but my own, this occurrence must of necessity be very frequent, as no safeguards exist to prevent it.

(3) The instrument may have been left, after an application to a patient, with both the *poles "grounded"* by means of the chains dangling from them and resting upon the floor. This oversight may not prove serious in dry, cold weather; but, it is never advisable to leave the chains attached to the poles when the instrument is not in use.

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*Thumb-screws beneath the driving-wheel post are provided for this purpose in my model.

(4) The plates may have loosened from the axle; and, in consequence, some may fail to revolve properly. To obviate this occurrence, double nuts should be used on the plate-axle.

(5) The *combs may have become displaced,* so as to touch the glass or to bear an improper relation to the paper collectors.

(6) The *case may be too small* for the plates; and thus allow of escape of the electricity to the ground. This will be very apparent to the eye when tested in darkness.

[TO BE CONTINUED.]

CLINICAL LECTURES.

MENORRHAGIA: STENOSIS OF THE CERVIX UTERI.

BY A. REEVES JACKSON, M. D., CHICAGO, ILLINOIS,
Professor of Gynæcology in the College of Physicians and Surgeons, Chicago, Illinois.

Reported expressly for THE PHYSICIAN AND SURGEON by Special Stenographer.

MENORRHAGIA.

The first patient that appears before us this afternoon is forty-three years of age, and has had six children. We are informed that she has had no miscarriages. A great many of the symptoms connected with the pelvic diseases in women are not, from a diagnostic stand-point, very important. A woman may tell you that she has pains and aches, but these are not, as a rule, indicative of the disorder which may be present. On questioning her we learn that she has pains in the stomach and back when walking; she has also a profuse menstrual flow. From the good, healthy-looking color on her cheeks we might be led to infer that there was nothing that particularly ailed her; but an examination may confirm or defeat this entirely.

I told you at one of our recent clinics that in many cases of menorrhagia the amount of the discharge is so great that you would expect it to prostrate a patient and render her anæmic, and yet it does not always produce these effects, which is owing to the fact that women, being subject to a physiological loss of blood, physiologically they make the repair rapidly. With reference to ascertaining the quantity of the discharge, we experience great difficulty, for women cannot estimate the quantity, except by the number of napkins used, which is not a very reliable method of measurement.

The causes of uterine hæmorrhage or menorrhagia may be constitutional or local. When they are of a constitutional character originally, there are still usually local conditions that keep up the disturbance. We cannot commonly ascertain the local causes by a mere vaginal touch, although we may be able to do so sometimes. I find on examining this case bimanually an enlarged uterus. The leucorrhœal discharge is considerable; the uterine tissues are soft, showing want of proper contraction of the uterine walls—usual accompaniments of enlargement; a condition which we term subinvolution. Some of the causes which, after child-birth, produce defective lactation, are the same as those which interfere with involution—that wonderful and interesting process (which I have spoken to you about so many times) by which the uterus generally succeeds in restoring itself to its normal size and condition after the parturient effort. But a great many things may interfere with this, and then the uterus stops short and remains enlarged, soft and tender; and as results, there may be leucorrhœa, or hæmorrhage, or both.

The uterus in this case is enlarged, implicating the upper portion of the organ; and the cervix is shortened at the expense of the body, projecting or bulging out in a manner as though the woman were six or eight weeks advanced in pregnancy. The os uteri is soft to the feel, patulous, velvety and ragged, or fringe-like. When this condition is present, it invariably means laceration and erosion, and may point to the cause of the hæmorrhage.

I now introduce the speculum which you see I hold in my hand, first carefully warming it. The hæmorrhage does not come from that patulous, velvety and ragged, or fringe-like condition of the os uteri to which we have alluded, which I now see. The discharge is slimy, the result of a chronic inflammation of the cervical canal. The vaginal surface is not a bleeding one. The cause of the excessive flow in this patient is, beyond a doubt, higher up. The enlarged condition of the uterus undoubtedly depends upon the chronic inflammation of that portion of the lining membrane from which the menstrual discharge comes, finally implicating the uterine walls. To find out the character of the lining membrane of the uterus, or whether it is the source of hæmorrhage, we must introduce a finger, possibly to the fundus, after dilating the cervical canal to a sufficient degree; in this way we are enabled to ascertain if there be a diseased condition present, and if so, its character must be definitely ascertained, otherwise we cannot expect to apply remedies with scientific accuracy.

In these cases it is absolutely essential for you to be sure that you are on the right track. In a case like the one before us, however, I should not advise any operative means which might involve danger, seeing that the hæmorrhage is not sufficiently profuse to impair her general health. The simple operation of dilating the cervix is attended with more or less danger; and therefore I do not deem it necessary to perform an operation here for the purpose of enabling us to find out the seat of the hæmorrhage so long as it does not injuriously affect the patient's general health.

STENOSIS OF THE CERVIX UTERI.

I am informed that this woman has stenosis of the cervix. She is thirty years of age. The term "stenosis" signifies a partial obliteration or narrowing of the cervical canal. It is a condition which may be either congenital or acquired. Nothing is known of it until after puberty—that is, until the woman begins to menstruate; then she experiences pain, and that pain continues throughout the whole period of the menstrual discharge, differing in this from some other forms of dysmenorrhœa in which there is pain only for a few hours or during the first day. In cases of organic stenosis the menstrual blood connot readily make its exit through the canal. The uterus then makes laborious efforts to expel the accumulated fluid from its interior; hence, the expulsive pains. We are told that this woman has been under treatment for some time, and has had the cervix dilated once with temporary benefit.

Now, there are two methods by which cervical stenosis may be relieved. The first is by incisions of the walls, enlarging the calibre of the part by means of a knife or scissors; and the other by dilatation. If the process of dilatation be chosen, it may be done slowly or rapidly. By the slow method, sounds or bougies are used. Commencing first with a small one, the cervix is dilated slightly; then a larger one is introduced, and so on until the limit of the patient's toleration is reached, or until we have introduced a bougie size number seven or eight, American scale. At another sitting, one, two or three days subsequently, we may commence with a bougie of the largest size admissible, and then introduce one after another as before until a sufficient degree of dilatation is attained. The sittings may need to cover weeks. Another mode of slow dilatation is by the use of tents, which consist in gradually spreading the walls of the cervix apart by means of dilating substances, tepelo, laminaria, etc. Or we may resort to mechanical dilatation, which, by means of screw force, we are enabled to secure in either a moderate or excessive degree. If the latter, it must be done under local or general anæsthesia. In this way, the canal may be enlarged so as to admit the index finger; but there is danger attached to this mode of dilatation. Some expert operators have torn into the peritoneal cavity. Sometimes the uterine walls are extremely friable, so that very little force will cause a sudden tear. Of course, this would not occur in a healthy uterine wall. No careful operator would tear through half an inch of dense, fibrous, cervical wall in a healthy condition, but such an accident may occur when that wall is diseased. Sometimes we can pass a flexible bougie where a stiff metallic instrument could not be passed, owing to flexures or other irregularities of the cervix, without the exertion of dangerous force. I will first pass a number seven bougie (male); and now a number eight. Continuing in this gradual manner, I have now introduced a number sixteen. It is not ordinarily necessary to use a speculum for the purpose of introducing a sound into the uterus, but here, with flexible instruments, it has been a convenience and a time-saver. Now, before I withdraw the speculum, some of you who are near enough can see the condition of the os. There is no redness or inflammatory condition about it, which is greatly in favor of the patient. At the last menstrual period we are told she had no pain, and the probabilities are that she will escape it in all her subsequent menstrual periods, if this amount of dilatation be kept up. To do so may necessitate a repetition of this process every three or four months.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, ANN ARBOR, MICHIGAN.

INFLAMMATION OF THE FEMALE MAMMARY GLAND.

Dr. E. Bumm in a recent paper (*Volkmann's Samml. Klin. Vort.*, Number CCLXXXII, 1886) calls attention to the frequency of puerperal mastitis; he describes briefly the rare inflammations of the mammary gland met with before it begins its function. Owing to the rich supply of firm, only slightly vascular connective tissue, the gland shows little disposition to spontaneous inflammations in the non-puerperal state. The tenderness and swelling noticed at the time of puberty are due to hyperæmia and only mechanical violence and superficial injuries, especially of the tender epidermis of the nipple, into which excitants of inflammation can penetrate, lead to higher grades of inflammations terminating in formation of abscesses. Even the breasts of the new-born infant, performing no physiological function, if crushed and injured will become the seat of inflammation, which, however, generally has little disposition to spread beyond the region primarily affected. Different is the course of inflammation affecting the fully developed actively secreting gland (of lying-in women, wet nurses, and the partly active of pregnant women). Here Bumm distinguishes (1) simple *parenchymatous* (*non-infectious*), and (2) *phlegmonous* (*infectious*) *mastitis.* The first form begins during the physiological hyperæmia and intumescence of the early days of the puerperal state and the cause lies in an accummulation of the newly formed secretion. The inflammation involves either the entire gland or only certain lobes of the same; the tender-walled acini, or terminal glandular vesicles are distended too much by the accumulating secretion, the nutrition of the gland cells is interfered with and secretion of milk ceases. The alveolar epithelium disintegrates and the continued hyperæmia leads to exudation into the interstitial connective tissue. In the secretion of the gland thus inflamed white blood corpuscles are found. The isolated micro-organisms also found in the secretions by Bumm, he considers of no etiological significance, chiefly because they have neither pathogenic properties nor are of constant occurrence. The hard, swollen gland with the integument tightly stretched over it and slightly reddened, is very sensitive especially when touched. There is fever up to 39° to 40° centigrade. The termination of the inflammation is by disintegration and resorption; only in rare cases, usually when the more superficial parts of the gland are affected does it lead to breaking out on the surface and discharge of the thickened contents containing disintegrating milk corpuscles. Sharply separated from this is the *phlegmonous form* of mastitis, the etiology of which bacteriological investigation has ascertained. For the causation of this form there are necessary primarily, a lesion in the nipple and pyogenic organisms which from here penetrate into the interior of the gland. Unclean, poorly fostered nipples and especially suppurating fissures in the same, are the best soil for the bacteria which in lying-in women usually originate in the lochial discharge. The course of invasion by the bacteria is either through the intercellular spaces of the wound into the connective tissue of the gland or, more frequently, through the milk ducts into the parenchyma of the gland. If the openings of the milk ducts are occluded by bacteria holding pus, the quantity of milk in the ducts is greatly augmented. The dammed up secretion facilitates the wandering of pyogenic germs into the terminal vesicles with their tender epithelium. Here the germs multiply, cause acid fermentation of the milk, and by means of the irritating acid contents inflammation is started up in the walls of the vesicles. The epithelium breaks down, the intervesicular tissue becomes infiltrated with pus corpuscles, and thus is formed a center of infection from which proceeds destruction of adjoining gland vesicles. In this way, gradually, whole lobes of the gland are destroyed.

If the micro-organisms wander into the interstitial tissue, phlegmonous inflammation in all its forms may arise, the nature depending on the kind of bacteria and the anatomical structure of the involved tissues. Chain cocci invade the tissues very rapidly, but cause suppuration only after a long time and in a small degree. Grape cocci are more rapidly destructive especially in adipose tissue.

In the region of the nipple Bumm differentiates between *phlegmonous areolaris* and *furunculosis areolæ*. The first he describes as a circumscribed infiltration under and closely connected with the skin surrounding the nipple; the infiltrated matter breaks down into pus and discharges on the surface. The latter is an infectious inflammation and purulent degeneration of the glands surrounding the nipple. Both forms often occur together. Of the inflammations affecting the subcutaneous and premammary cellular tissue, Bumm dwells particularly on phlegmonous erysipelas (Schrœder) which likewise spreads from fissures in the nipple. The superficial erysipelatous swelling has great tendency to extend to deeper parts. The inflammation leads to abscess formation and in the pus chain cocci are found. More rare is the occurrence of inflammation in the cellular tissue lying between the gland and the fascia of the pectoralis muscle and usually it is a continuation of the parenchymatous inflammation; here large abscess cavities may form. The gland then appears to lie "on an air cushion." The fever in these cases is usually very high and the course of the disease prolonged. Lastly, Bumm writes of the metastatic processes in the mammæ which are noticed in puerperal pyæmia. Whether micro-organisms which have gotten into the blood, are removed from the latter with the milk secreted and thus infect the gland, future investigations must decide. Regarding the therapeutics, Bumm first emphasizes the prophylactic side of the subject; attention to the breasts during pregnancy and in child-bed, scrupulous supervision over the suckling apparatus, treatment of wounded nipples, prevention of accumulation of milk in the breasts. If mastitis has broken out, treatment depends upon whether it is infectious or non-infectious, which in the beginning of the disease is often very difficult to ascertain and can only be determined by bacteriological examination. In the non-infectious form treatment is limited to the application of moderate pressure to the breasts by means of proper bandaging, emptying the breasts by frequently putting the child to them or by diverting the contents to the intestines. The nodules often remaining are removed by repeated massage. If the inflammation has arisen from infection incisions should be freely made and early, not waiting for "ripening of the abscess at the expense of gland tissue."—*Schmidt's Yahrbucher*, Band CCXII, Number XII, 1886.

COCAINE FOR THE EXTRACTION OF TEETH.

G. E. Grevers (*Weekbl. v. h. Ned. Tij. v. Genecsk*, 1886, Number XVII) injects ten to fifteen minims of muriate of cocaine into the fold between the gums and cheek near the tooth to be extracted, and thus makes the extraction painless, and that at the moment when the gums are insensitive. Of thirty-six extractions, thirty-two were completely painless; in four only very slight pain was felt.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY WILMOT F. MILLER, CLINICAL CLERK.

PARTIAL DESTRUCTION OF NOSE FROM LUPUS; HOT-WATER APPLICATIONS; CURE.

Joseph S., aged fifty-two, Logansport, Indiana; saloon-keeper. Admitted March 29, 1887.

History.—Contracted catarrh in 1863 while in the army, which has persisted to the present time causing necrosis of the septum and nasal bones. One year ago a sore appeared on his upper lip, which refused to heal, and has gradually spread over his lip, nose, and cheek. Thick, hard and dry crusts form on the surface of the sore.

Present Condition.—The left ala and a portion of the upper lip is ulcerated away. The existing portion of the lip and nose have a deep purple hue. The margins of the ulcer are hard and elevated, covered with a thick brown crust, which repeatedly drops off only to be reformed in a short time. The surrounding tissues are hard and indurated, and the entire nose hypertrophied. The parts are tender and painful.

April 1: Patient examined by Dr. T. J. Sullivan. Diagnosis—lupus. Long continued applications of hot water by means of a sponge compress were ordered.

April 7: Clinic.—Professor Maclean ordered the hot applications to be continued, and the following to be given:

℞. Liq. potassii arseniti.............................. ʒv.
Aquæ, distil., q. s.................... .... ℥vj.

M. Sig. One teaspoonful after each meal well diluted in water.

April 11: Condition of ulcer and surrounding parts much improved.

April 14: Improvement continues. Hypertrophy of nose and induration of tissues greatly reduced.

April 28: Ulcer healed, and surrounding tissues present a healthy appearance. Dismissed.

FALSE ANKYLOSIS FOLLOWING SPRAIN OF ANKE-JOINT.

Miss M. T., aged sixteen, Jersey City, Ohio. Admitted October 29.

Two months ago the patient slipped from a step and sprained her right ankle. The day following the accident the ankle became badly swollen and the pain so severe that she was compelled to take her bed. The foot continued inflamed and greatly swollen. Two weeks after the accident a large quantity of pus and blood discharged through an opening formed on the external part of the ankle, which subsequently healed. The ankle is the seat of a constant dull pain, which is not aggravated, however, at night.

Condition.—The foot and ankle are swollen. It is not painful or tender on pressure. There are no movements in the ankle or tarsal joints. The foot is flexed, and when she bears her weight on the foot it causes a sharp pain in her ankle and heel.

October 29: Dr. Sullivan saw the patient and ordered passive movements to be made, and applications of hot water several times daily.

November 1: Some lateral movement in the foot and slight flexion and extension at the ankle-joint have returned and the swelling has mostly disappeared.

November 14: Patient placed under the influence of chloroform, when Dr. Sullivan succeeded in breaking up most of the adhesions, but did not succeed in getting full normal movement although motion was greatly increased.

November 18: Amount of movement not materially increased.

January 27: Patient returns to the hospital but very little improved after spending six weeks at home where passive movements were continued. The usefulness of her foot is greatly improved; she now walks without the aid of crutches; motion at the ankle-joint is limited.

February 7: Anæsthetic given and a second attempt was made to break up the adhesions which was much more successfull than the former.

March 10: Movement more free but not fully restored to normal. Dismissed.

MALIGNANT ULCER OF TONGUE.

S. G. G., aged thirty-six, laborer; Albion, Michigan. Admitted January 27.

History.—For seven weeks he has had an ulcer on his tongue which has refused to heal and has been gradually enlarging. For three months prior to the appearance of the ulcer his tongue had been fissured. No history of syphilis. For three years he has had repeated attacks of hemoptysis. The ulcer is on the anterior portion of the tongue; the surrounding tissues are hard and indurated.

January 27: Clinic.—On account of gastric trouble and a threatened attack of hemoptysis no operation will be performed for several days.

January 30: Clinic.—Patient placed under the influence of chloroform; the tongue drawn out, secured and held in position by passing a strong silk ligature through the sound side. The ulcer with the indurated tissue was removed. The hæmorrhage was very profuse; the large vessels were secured with ligatures and the free oozing stopped by applying the actual cautery to the wound.

February 17: Patient's general health has improved very much, and the wound being nearly healed he is dismissed.

GENERAL CORRESPONDENCE.

PARIS LETTER.

M. BOUCHARD ON THE AUTO-INOCULATION OF DISEASE. M. LAFFON ON TOXICOLOGY OF ALKALOIDS.—M. RECLUS ON THE TREATMENT OF EPITHELIOMA OF THE SKIN BY CHLORATE OF POTASSIUM AND BISTOURI.

M. BOUCHARD ON THE AUTO-INOCULATION OF DISEASE.

The lectures recently delivered by M. Bouchard, professor in the Paris Medical Faculty, on the auto-inoculation of disease, have just been published by one of his disciples in one large, handsome volume. The ideas, or rather the theories, advanced by M. Bouchard are far from being generally accepted, there being even in some quarters a tendency to sneer at them; but, whatever may be our opinion concerning these investigations, our interest is in no way diminished on reading them, characterized as they are by great originality, the author endeavoring throughout to base his theories on facts and not upon simple inferences. The principal idea enunciated in these lectures is, that man is not only poisoned by absorbing a toxic substance, but also when an injurious substance within his organism is either formed by some perversion of the nutrition or secreted by a microbe, and which he does not eliminate. The healthy man is perpetually working up toxic substances produced by the microbes that inhabit the digestive tubes, and also by the formation in the intestine of the elements to be assimilated, and those arising from normal disassimilation. If man is not constantly poisoned, it is only because his liver arrests, transforms, or neutralizes the toxic substances before they reach the general circulation, while those which do pass into the general circulation are eliminated by the kidneys. Already last year, M. Bouchard communicated several notes to the Academy of Sciences on the toxical properties of normal urine. He maintains that the urine contains seven poisonous substances, which he describes as follows: (1) A diuretic substance (urea). (2) A narcotic substance. (3) A sialogenous substance. (4) One capable of contracting the pupil. (5) An hypothermic substance. (6 and 7) Two substances capable of producing convulsions, one of an organic nature and the other potash. (It will be remembered that M. Rabuteau, in several communications to the Biological Society between 1870 and 1884, insists upon the convulsive effect of potash). From these facts M. Bouchard draws the following conclusions: The urine is poisonous, because it contains all these substances; the blood is not poisonous, because the toxic elements which it contains are continuously eliminated by the kidneys, and those which are not so eliminated are oxidized out in proportion as they are received. As to the part played by microbes, M. Bouchard is of opinion that, as man is always filled with them, disease is not due merely to their presence in man, but to the fact that under certain circumstances he presents more favorable conditions for their development and multiplication. The infectious agents perpetually besiege him, he reacts against them, and in the struggle generally comes out victorious; but when his vitality is diminished, so likewise is his means of defense, and the microbes invade the organism. Derangements in the nutrition are the principal cause of the development and multiplication of micro-organisms. Such were the theories developed in M. Bouchard's lectures, which were illustrated by numerous experiments. It is not our place to criticise them here; but we may remark, however, that the idea of a continuous formation and elimination of toxic substances in the organism is alone original with the author. That concerning the causes of the development of micro-organisms does not belong to him, as it was long since expressed by M. Pasteur; and one of the latter's disciples, M. Duclaux, developed it with remarkable talent in his work entitled, "Le Microbe et la Maladie." Moreover, M. Bouchard has not brought forward any new fact to substantiate this idea, which he should have done before accepting it as an absolute truth, as many examples show that it is not true in all cases.

M. LAFFON ON TOXICOLOGY OF ALKALOIDS.

During the last two years, much attention has been given in France to the purity of the alkaloids used in medicine, as is shown by the numerous publications on quinine, narceine, and digitaline. *Apropos* of the latter drug, M. Laffon, who was last year sent by the Minister of Public Instruction to Germany and Russia on a mission to investigate the teaching of toxicology in those countries, has just published an important work, which has been crowned by the Academy of Medicine. He concludes that the crystallized digitaline of commerce in France, the amorphous chloroformic digitaline of the French codex, and the amorphous digitaline called Homolle and Quevenne, as well as the German *digitoxine*, all possess about the same chemical, physical, and toxical properties. The fusibility of amorphous digitaline is somewhat greater than the crystallized form. The experiments made with one form of digitaline agreed in every respect with those made with the other. Digitaline cannot be detected in the liver, kidneys, or the spleen, except when it has previously been introduced into the stomach in doses of at least ten centigrammes, and that only in cases where there has been no vomiting. If the poisoning has been conducted in a slow manner, and the poison sought for but a short time after death, the drug can only be found in the vomitings, in the contents of the stomach and intestines, but nowhere else. If burial has taken place, it is almost useless to look for the poison, even only after a few days. M. Laffon became assured of this fact through experiments on animals, which he buried and exhumed in the same manner as is done with human bodies. When the intoxication takes place hypodermically, digitaline can only be found by seeking for it in the muscles in the neighborhood where the injection was made. When introduced into the general circulation, it can only be found from ten to twenty minutes after the injection. As regards the physiological chemistry of the subject, M. Laffon comes to the following conclusions: As Vulpian has already demonstrated, digitaline is absorbed slowly; it is not eliminated unchanged by the kidneys; it does not seem to accumulate in the organs, at least in the form of digitaline, as every chemical test that has been made after poisoning has been followed by negative results. The drug does not undergo change in the digestive tube, but is probably oxidized in the blood. M. Laffon terminates this interesting work on medico-legal toxicology with a description of the most sensitive test for digitaline, which he has been able to find. The substance supposed to contain digitaline is moistened with a small quantity of a mixture of sulphuric acid and alcohol in equal parts. It is then heated until it takes a slight yellowish tint, when a drop of a weak solution of perchloride of iron is added. A magnificent blue-greenish coloration now appears, which remains permanent for at least twenty-four hours. Other oxidizing agents, such as chlorinated water, bromated water, etc., give the same results. This reaction is sensitive to the tenth of a milligramme.

M. RECLUS ON THE TREATMENT OF EPITHELIOMA OF THE SKIN BY THE BISTOURI AND CHLORATE OF POTASSIUM.

In the *Gazette de Hopitaux* of the 1st of March, M. Reclus publishes a paper on the treatment of epithelioma of the skin by bistouri and by chlorate of potassium. The author mentions the case of a patient having an intra-cutaneous tumor in the right cheek. M. Reclus effected ablation of the tumor, and the result seemed satisfactory, but a part of the skin remained red, thick, and inflamed. Compresses of a six per cent. solution of chlorate of potassium were applied. Tedeschi, in 1847, first treated an obstinate case of epithelioma of the skin with chlorate of potassium. MM. Leblanc and Bergeron have employed this substance in the treatment of epithelioma in horses.

M. Reclus described several cases of epithelioma in which he applied chlorate of potassium successfully. This substance should not be administered internally. Bistouri is preferable in certain cases, having equally good results, and it causes cicatrization to take place more rapidly than chlorate of potassium. M. Reclus concludes from his observations that chlorate of potassium should be employed only in cases where the tegument alone is affected; in cases of patients of enfeebled constitution; in certain cardiac patients where the use of chloroform has to be avoided; in extensive epithelioma adhering to the subjacent tissues where resection or amputation is necessary.

DR. BALDY'S CRITICISM ON "LACERATION OF THE PERINEUM."

TO THE EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Sir.*— In the May number of THE PHYSICIAN AND SURGEON I find an article on "Laceration of the Perineum," by Dr. Henry O. Marcy, of Boston, in which he freely criticises my article on "Emmet's Operation for Restoration of the Pelvic Diaphragm."

He says: "The following quotation is given at length from Dr. Baldy's paper, since it furnishes a clear exposition and emphasis of the views of Dr. Emmet." Then follows the quotation, which, if it had been carried far enough, would have made his article superfluous, and which certainly, at least as Dr. Marcy understands it, does *not* furnish "a clear exposition and emphasis of the views of Dr. Emmet." In the first place, as I shall show, we do not differ materially in our theories of the injury, although we do in our method of repair. In the second place, some of the points advanced in the quotation are my own and not Dr. Emmet's, and, whether right or wrong, cannot fairly be attributed to him. For instance, the occasional absence of the transverse perinei muscle, which Dr. Marcy says I "speak of as so unimportant that they are even of doubtful existence," and further on, "the straight muscular fibres of the pelvic floor which cross the pelvis and unite anteriorly to the anus are, so far as I am aware, almost never wanting." Dr. Emmet holds the same view, and also thinks they are of as much importance in these injuries as does Dr. Marcy. I have taken the liberty personally of doubting the importance attributed to these few muscular fibres. I accept the results which follow the injury, namely, the drawing open of the vulvar orifice, but I think the action of the sphincter vaginæ alone sufficient to account for this. I have myself failed on several occasions to find the transverse perinei muscles in dissections, and no less an authority than Holden, in his "Manual of Anatomy," page 421, says: "This muscle is of insignificant size, and sometimes absent." Again, page 422: "The deep transverse perinei is a small muscle occasionally present."

Dr. Marcy would make it appear that I attribute all the trouble to an injury of the pelvic fascias, and the *pelvic fascias alone*; (quoting), "he follows with a description of the *pelvic fascias* [my own italics] and the attachment thereby of its viscera, and offers it as a 'clear and full understanding' of these changes," while *he* believes the injury is to the muscles which unite at the so-called perineal body; "thus we are forced to conclude that the tissues injured are really no other than the union of the muscles which blend in the perineal space." Let us see how near right he is in his conclusion in my behalf, and whether or not I included the muscles in the injury. That I did hold that the *muscles* were involved is clear from the following quotations from my paper: "The advancing head of the child crowds the soft parts in advance as it sweeps along the pelvic floor, and the *fascias* and *muscles just described* becoming over-distended, *separate* and *retract*, forming deep sulci laterally." Again: "The mere rupture of the *fascias* and *muscles* would cause the woman little trouble," etc. Even in the part of my paper as quoted by Dr. Marcy are the words, "a good proof of this is that we constantly see women going about their daily work, who have their superficial or skin perineums, not including the *fascias* or *muscles*, torn," etc. How it is possible for any one to read my paper and carry away the idea that I believe in an injury to the pelvic fascias alone, and not to the muscles, is inconceivable. Dr. Marcy must surely have read a mere abstract, and not a complete report. The only complete report I have myself seen was in the *American Journal of Obstetrics* for April, under society transactions.

Speaking of the muscles at the vulvar orifice, Dr. Marcy says: "Although the connective tissue here is never wanting, it certainly is not the recto-vesical fascias"; but with peculiar inconsistency he has before said: "At the most, the recto-vesical fascia is the binding tissue which holds in place the various groupings of muscles described earlier in this paper, and for this to be injured, and not the muscles which it is their function to hold in place, would be certainly exceptional." These muscles, without the support given them by the fascia, would lose half their importance and strength, and it is a mere quibble as to whether you call it pelvic fascia or not—at the least it is a direct continuation of the pelvic fascia. I will go even further than Dr. Marcy, and say that I believe it practically impossible for either muscle or fascia to rupture alone and not include at least a part of the other; the connection is so intimate that it is extremely difficult to separate them even by careful dissections. Having established the fact that our views do not differ materially in regard to the rupture of the muscles, all the criticisms advanced by Dr. Marcy on this ground fall through, and need not be considered separately.

As to the manner of repair, however, we do differ essentially, and after carefully reading his method I am still of the opinion that Dr. Emmet's is by far the best one ever offered the profession.

In the operation proposed by Dr. Marcy, in which there is nothing new excepting the introduction of the suture and pins, the same objections hold good that do to all other methods. The sutures or pins are all introduced (excepting one) from the skin surface, and are deeply buried, including an immense deal of tissue. This necessarily causes great pain, and generally leads to the use of opiates and stimulants, and the binding together of the knees, and all their attending suffering. In marked contra-distinction to this, the sutures in the Emmet operation are all introduced from mucous surfaces, and do not give the least pain nor call for the use of any drug whatever; the patient moves about her bed *ad libitum*, provided she is careful not to separate her knees beyond a reasonable distance. Dr. Marcy finds it necessary to keep the bowels confined for a few days, and has to draw the urine for "some days." This is never necessary in Dr. Emmet's method—the patient gets on her hands and knees and passes her own water, and her bowels are opened at will. The large number of sutures which Dr. Marcy dreads in this operation are seven or eight in number, usually, and are very easy of introduction; the whole operation, in skilled hands, taking not more than half an hour. The stitches are hard to remove, but one can easily use catgut sutures, which become absorbed. The operation proposed by Dr. Marcy does not recognize nor deal with the lateral sulci which run far up the vagina, and consequently, like all other methods, "does not overcome the patulous condition of the introitus vaginæ in case of great relaxation of the vaginæ" (Dudley-Pepper's System of Medicine).

Dr. Marcy is careful to say: "I would not be understood as doubting that Dr. Emmet secures *excellent results*, and have been personally delighted at the dexterity and brilliancy of his operative measures." Here he concedes all I could wish him to. I would ask him if it is not "*excellent results*" we want, and not theory? While I personally believe that the muscles are lacerated at the time of the injury, I have my doubts as to whether they have not retracted too far to be freshened and brought together again months after, unless we remove a good deal of tissue laterally. At any rate, they are perfectly harmless to again draw open the vulvar orifice and tear open our line of union. "If the student thinks the recto-vesical fascia is all the fault, he may conclude with a thin perineum," etc., says Dr. Marcy. The student has no business to think any such thing, and "conclude with a thin perineum," and then say that he has either adopted Dr. Emmet's theory or done his operation —because Dr. Emmet does neither of these.

The operation needs no antiseptic or aseptic treatment excepting hot-water vaginal injections, and I cannot see that any number of vaginal wounds would make any difference in applying this.

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EDITORIAL PERISCOPE.

MICHIGAN STATE MEDICAL SOCIETY.

The twenty-second annual meeting of the Michigan State Medical Society was held in the capitol building, Lansing, May 12 and 13. Addresses of welcome were made by Governor Luce and Dr. G. H. Ranney, the former in the name of the State, the latter for the local medical society.

The most important action of the opening session was the division of the society into three sections: Medical, Surgical, Gynæcological and Obstetrical. This arrangement has been desired by the progressive members of the society for several years. Last year's efforts were made to reoganize the society on this basis, but the movement did not meet with the favor of the majority and action was indefinitely postponed. Strong opposition was made this year to its adoption, but the advocates of the measure succeeded in carrying the movement. Putting it into immediate effect caused some confusion, but the wisdom of the change was clearly demonstrated before the close of the meeting. For a number of years past the collection of papers to be read and discussed has become so large that the reading of each paper was limited to a fixed time, and its discussion restricted to a few minutes. Even with this curtailment a large proportion of papers were summarily dismissed with the mere reading of their titles. The sessions were made uncomfortable by the constant rush to get through with as much of the programme as possible. In this respect there was a marked change, due to the sectional arrangement of the meeting this year. All the papers were read, and with the exception of the medical section ample time was afforded for a free discussion of each paper. This arrangement offers some encouragement to the members to present papers and to take an increased interest in their discussion. The change will result in producing a higher grade of scientific work.

In the preparation of papers great improvement can be made, particularly in one point. As a rule papers have too much that is preliminary. It should be borne in mind that medical societies are composed of medical graduates and experienced physicians and surgeons, and that the reading of a great mass of well known facts and the stringing out of familiar and typical symptoms are only a useless consumption of valuable time. Brevity consistent with clearness is a valuable feature that is too seldom conspicuous in society papers.

To supply a want that was thought to be made by having all the scientific work of the society confined to the sections, it was decided to have three addresses delivered in the general sessions on the department of medicine represented in each of the three sections, respectively. Each section being empowered to elect its own officers and conduct its own business, the papers were classified and the several sections adjourned to their respective rooms. The officers of each section consist of a president, to be elected annually, and a secretary who shall serve for two years. (The persons to deliver these representative addresses are to be elected by the sections).

This radical change in the conduction of the society's work, we hope, is only initiatory to many others that are demanded before the best scientific work can be accomplished at its meetings. Some plan to diminish the amount of time consumed in conducting the general business of the society must be perfected. One-half of the time of the meeting is now spent in political and executive work.

We do not think the time has arrived to make the society a delegated body, but we feel that the general business can be delegated with economy to a selected few, who could be chosen by an informal ballot.

The following are the officers for the ensuing year: President, Dr. Theo. A. McGraw, of Detroit; first Vice-President, Dr. Tyler, of Bay City; second Vice-President, Dr. Herdman, of Ann Arbor; third Vice-President, Dr. Rose, of Decatur; fourth Vice-President, Dr. Groner, of Big Rapids; Secretary, Dr. Geo. Duffield, of Detroit (holding over another year); Treasurer, Dr. Hemingway, of Kalamazoo. Judicial Council: Drs. McCall, of Kalamazoo; Hugh McCall, of Lapeer; and Patterson, of Charlotte.

AMERICAN MEDICAL ASSOCIATION.

The American Medical Association held its thirty-eighth annual session in Chicago, June 7 to 10. This meeting stands out in bold contrast to those held the two preceding years, on account of the harmony which pervaded its general sessions. It will be remembered as one of the largest, most enjoyable and profitable sessions held since its organization. Delegates were present from nearly every state in the Union, and the scientific work of every section was of such an order that the profession can feel proud of its national body.

The following officers were elected for the ensuing year: President, A. Y. P. Garnett, of Washington, District of Columbia. Vice-Presidents, Duncan Eve, of Nashville, Tennessee; David Collville, New York; Charles O'Hagan, North Carolina; and A. Stedman, of Colorado. Permanent Secretary, W. B. Atkinson, Philadelphia; Assistant Secretary, Jos. Ransohoff, Cincinnati. Treasurer, Richard J. Dunglison, Philadelphia. Librarian, C. H. A. Kleinschmidt, Washington, District of Columbia.

Cincinnati, Ohio, was selected as the place for the next annual meeting, and Dr. W. W. Dawson, of that city, was appointed Chairman of the Committee of Arrangements.

CONDENSATIONS.

STATIC ELECTRICITY IN MEDICINE.—There is begun in this issue an article on "Static Electricity in Medicine," by Professor Ambrose L. Ranney, M. D., which will continue through several numbers of our journal. The revival of this form of electricity as a therapeutical agent is earnestly advocated by Professor Ranney, who has greatly improved the usefulness of the modern induction machine.

OUR agent, Mr. Martin Clark, will call upon the physicians in the states of Michigan and Illinois during the months of July, August and September. The trip is made for the purpose of introducing THE PHYSICIAN AND SURGEON to members of the profession who are not already subscribers, and we hope that old friends of the journal will aid him in this very laudable object. From some of the latter—those who have been too busy for the past year or longer to gladden the publisher's heart by sending a draft or postal note—he will look for something more, namely, money.

REMARKABLE FECUNDITY.—A lady in New York had up to date, some five years ago, given birth in the space of three years and seven months to twelve children. The first was a single birth. Ten months after the first, the mother gave birth to twins, and ten months later to twins again. The fourth delivery was of triplets, and the fifth was of four children. All the children lived. "This reminds us," says the *New Orleans Medical and Surgical Journal*, "of the unfortunate husband who was overheard mumbling: 'Dash me if I know when this thing's going to stop! My wife started in with twins; next year she had triplets, and I suppose she'll be having quadrupeds next, and then centipeds!'"

CHRONIC CONSTIPATION.—In an article on "Rational Therapeutics of Chronic Constipation," Dr. Spender, of Bath, calls up afresh in the *Polyclinic* Christison's statement that the cathartic property of aloes is much increased by combining it with sulphate of iron. Dr. Spender's plan of administration is to prepare a pill containing from a quarter to a half grain of the socotrine extract of aloes, with a grain or a grain and a half of sulphate of iron. With these a little extract of belladonna (say one-eighth of a grain) may be blended. The treatment begins with an adult patient in taking such pill three times a day, immediately after the principal meals. There may be no effect noticed for two or even three days, but most likely within forty-eight hours there will be an evacuation of the bowels, but nothing approaching to purgation ought ever to be permitted. When a loose motion occurs, withdraw one pill; at the end of another interval omit the second pill; and within another month the condition of affairs will require only one or two pills per week; finally, "he takes a pill occasionally for the sake of maintaining health and keeping off old troubles."

LACERATED CERVIX THE CAUSE OF EPITHELIOMA.—In a communication to the *Southern California Practitioner*, Dr. Walter Lindley says that Dr. Emmet regards lacerated cervix with cystic degeneration a condition closely related to malignancy. He had seen four cases of lacerated cervix with cystic degeneration develop into epithelioma, and has never known of a case of epithelioma in a woman who had not gone through childbirth. Dr. Emmet emphasized this with the positive statement that "there is no epithelioma of uterus except after lacerated cervix;" and when all physicians learn the importance of operating on the lacerated cervix, epithelioma of the uterus will be a disease of the past.

MEDIÆVAL NASTINESS.—The *Medical News* shows that it continues to exist, the survival of which it compares to the survival of the strange gar-fish of the Chesapeake, which remains as almost the sole representative of the monstrous, misshapen ganoid fishes which have been swept out of existence by the successive cataclysms of geologic ages. This perpetuation the *News* finds in a recently received volume which claims to be the "American Homœopathic Pharmacopœia." In this work, which does not appear to be published by the authority of any convention or body of men, uric acid is directed to be prepared from human urine by concentration, or from excrements of serpents; guano is obtained from the accumulated excrement of sea birds; lava from the overflow of Mount Hecla, in Iceland; hippomanes is a glutinous mucous substance separated from the allantoic fluid or membrane of the pregnant mare or cow; lyesin is the dried saliva of the mad dog; mephitis is the desiccated stinking fluid of the skunk; psorinum is obtained by squeezing the pus from the festering itch eruption of the negro—whilst the dried bodies of the little red lice which render sad the bright summer-days of the domestic fly, appear under the more than regal title of tronnbidium muscæ domesticæ; dried fox liver and dried fox lungs, centipedes, wasps, and other things uncanny and unclean seethe and bubble in this witch's cauldron that steams in these later days, not in the darkness of night, but in the full light of a great medical center.

MORE MIND, MORE MADNESS.—In the following paragraph the *Lancet* embodies a thought that is food for contemplation: It is in no way surprising that insanity should seem to increase in races or classes which are being intellectually stimulated by education. There is always in every community a proportion of brains which, being brought into action, will break down. This proportion doubtless diminishes as the community is elevated, and in a very few generations the result of culture may—probably will—be to develop a better stock, looking upon the people as a whole; but at the outset of the educationary process, and in the generation first taught, the immediate result will be a considerable number of wreckings. This general principle is applicable to all races, peoples, and classes, and it would seem to explain why the first effect of endeavoring to elevate the negroes has been to produce an apparent increase of insanity among them.

THE "COMPLETE" OPERATION FOR CANCER OF THE BREAST.—Mr. Banks, in opening the debate in the Harverian society on the subject of "Extirpation of the Axillary Glands, a necessary Accompaniment of Removal of the Breast for Cancer," admitted that the complete operation as advocated by himself was indeed a very severe measure and its mortality was very considerable in advance of the old incomplete method in which the axilla was not opened. At the same time, however, his table of eighty-two cases showed that the duration of life was prolonged, and the recurrence of cancer less seldom occurred; and these results justified the greater risk to which the patient was exposed. He laid great stress on not allowing the chest wound to remain exposed while the axilla was being cleared, and advocated closure of the wound from below upwards, as the operation proceeded; the gland could best be removed by the knife, but enucleated with the aid of the fingers and two pairs of forceps. He did not hesitate to tie and remove portions of the axillary vein, if this last vessel interfered with complete removal of the glands.

NEW PUBLICATIONS.

BOOKS AND PAMPHLETS RECENTLY ISSUED.

"Fourth Annual Report of the Northwestern Hospital for Women and Children, Minneapolis, Minnesota, for the year ending November 1, 1886." Minneapolis: J. Kimball & Company, 1886.

"The Antiseptic Treatment of Summer Diarrhœa." By L. Emmett Holt, A. M., M. D., Attending Physician to the New York Infant Asylum. Reprinted from the *New York Medical Journal* for January 29, 1887.

"Some Considerations Concerning Cancer of the Uterus, Especially its Palliative Treatment in its Later Stages." By Andrew F. Currier, M. D. Reprinted from the *New York Medical Journal* for March 5, 1887.

"The Physician's Leisure Library: The Determination of the Necessity for Wearing Glasses." By D. B. St. John Roosa, M. D., LL. D., Professor of Diseases of the Eye and Ear, in the New York Post-Graduate Medical School and Hospital; Surgeon to the Manhattan Eye and Ear Hospital. Detroit: George S. Davis, 1887.

"The Physician's Leisure Library: Granular Lids and Contagious Diseases of the Eye." By W. F. Mittendorf, M. D., Ophthalmic Surgeon to the New York Eye and Ear Infirmary, Bellevue Hospital Out-Door Department, Nursery and Child's Hospital, and the New York Infant Asylum, etc., etc. Detroit: George S. Davis, 1886.

"A Compend of Electricity and its Medical and Surgical Uses." By Charles F. Mason, M. D., Assistant Surgeon United States Army. With an Introduction. By Charles H. May, M. D., Instructor in Ophthalmology, New York Polyclinic. "Medical Briefs," Number III. Cloth, $1.00. Philadelphia: P. Blakiston, Son & Company, 1887.

"A Practical Treatise on Obstetrics." Volume II (four volumes), The Pathology of Pregnancy. By A. Charpentier, M. D., Paris. Illustrated with lithographic plates and wood engravings. This is also Volume II of the "Cyclopedia of Obstetrics and Gynæcology" (twelve volumes), issued monthly during 1887. New York: William Wood & Company.

"A Text-Book of Pathological Anatomy and Pathogenesis." By Ernst Ziegler. Translated and edited for English students by Donald Macalister, M. A., M. D. Three parts complete in one volume. Octavo: one thousand one hundred and eighteen pages; two hundred and eighty-nine illustrations. Price, extra muslin, $5.50; sheep, $6.50. New York: William Wood & Company.

"A Practical Treatise on Obstetrics." Volume III (four volumes), The Pathology of Labor. By A. Charpentier, M. D., Paris. Illustrated with lithographic plates and wood engravings. This is also Volume III of the "Cyclopedia of Obstetrics and Gynæcology" (twelve volumes), issued monthly during 1887. Price of the set, $16.50. New York: William Wood & Company.

"Proceedings and Addresses at a Sanitary Convention held at Coldwater, Michigan, September 9 and 10, 1886." Under the Direction of a Committee of the State Board of Health and Committee of Citizens of Coldwater. Supplement to the "Report of the Michigan State Board of Health for the Year 1886." By Authority. Lansing: Thorp & Godfrey, State Printers and Binders, 1887.

"Proceedings and Addresses at a Sanitary Convention held at Big Rapids, Michigan, November 18 and 19, 1886." Under the Direction of a Committee of the State Board of Health and Committee of Citizens of Big Rapids. Supplement to the "Report of the Michigan State Board of Health for the Year 1886." By Authority. Lansing: Thorp & Godfrey, State Printers and Binders, 1887.

"Refraction of the Eye: its Diagnosis, and the Correction of its Errors." By A. Stanford Morton, M. B., F. R. C. I. (Edinburgh), Surgeon to the Royal South London Ophthalmic Hospital; Clinical Assistant of Moorfield's Ophthalmic Hospital. Third edition. 12mo: sixty-eight pages. Cloth, $1.00. Philadelphia: P. Blakiston, Son & Company, 1886. For sale by Sheehan & Company, Ann Arbor, Michigan.

"Pregnancy, Parturition and the Puerperal State, and their Complications." By Paul F. Mundé, M. D., Professor of Gynæcology at the New York Polyclinic; President of the New York Obstetrical Society, and Vice-President of the British Gynæcological Society; Late Obstetric Surgeon Maternity Hospital, etc. Physicians' Leisure Library Series. Complete, $2.50; single copies, 25 cents. Detroit: George S. Davis, 1887.

"Ovariotomy for Double Ovarian Tumor with Tubercular Peritonitis." By Mary Snoddy Whetstone, M. D., Attending Surgeon of Northwestern Hospital for Women and Children, Member of Hennepin County Medical Society and Minnesota

State Medical Society. Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*, Volume XIX. October, 1886. New York: William Wood & Company, 1886.

"The Nursing and Care of the Nervous and the Insane." By Charles K. Mills, M. D., Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine; Neurologist to the Philadelphia Hospital; Consulting Physician to the Insane Department of the Philadelphia Hospital; Lecturer on Mental Diseases in the University of Pennsylvania, etc. Practical Lessons in Nursing. 12mo: Cloth, $1.00. Philadelphia: L. B. Lippincott Company, 1887.

"Quiz Compends: Number IX." A Compend of Surgery for Students and Physicians. By Orville Horwitz, B. S., M. D., Demonstrator of Anatomy in Jefferson Medical College; Chief of the Out-Door Surgical Department of Jefferson Medical College Hospital, and Late Resident Surgeon of the Pennsylvania Hospital, Philadelphia. Third edition, thoroughly revised, enlarged and improved. With ninety-one illustrations. Cloth, $1.00; interleaved for taking notes, $1.25. Philadelphia: P. Blakiston, Son & Company, 1887.

MEDICAL DIGEST.

ACONITINE IN THE TREATMENT OF NERVOUS DISEASES.

In a paper read before the Medical Society of the County of New York, Dr. Waitzfelder described the physiological action of the amorphous and crystalline forms of aconitine.

The drug, he said, seemed to have a double action on the nerve centers: First, that of irritation; second, that of subsequent paralysis. In the treatment of diseases of the nervous system, it was in neuralgias especially that it was of service, and, after citing evidence in this direction from different authorities, he said his own experience with the drug in this class of nervous affections had been equally satisfactory. He had succeeded in curing some patients and relieving others, who had suffered from facial neuralgia for a varying length of time. He had found a combination of aconitine and veratrine, used externally, to act better than aconitine alone. Caution should be observed in applying it near the eye, and over cuts and bruises, as a poisonous amount might enter the system. He had employed aconitine in three case of sciatica; in two with decided benefit; in the third with no apparent benefit after a month. In the treatment of pachymeningitis, whether syphilitic or not, he had occasionally observed benefit. A marked example was related, in which a woman was relieved of pain within three days, after antisyphilitic treatment alone, long continued, had been ineffectual. There was a history of syphilis. The use of aconitine was almost always followed by some relief in such cases, but not always so soon. He had used it for agonizing headache from tumor in two cases, but without giving relief. In two cases of exophthalmic goitre no effect upon the tumor or the eyes was observable, but the patients said they felt better after the use of the drug. It was of benefit in active congestion of the brain with increased blood pressure from excessive action of the heart. Here it was combined with bromide of potassium. In insomnia from business troubles it was of benefit in connection with small doses of bromide of potassium. In selected cases, carefully watched, it was useful for hyperæsthesia from spinal irritation, and in cases in which there were doubts as to commencing myelitis.

SUBSTITUTION BY DRUGGISTS.

There was a time when there was no intermediary between the physician and his patient—when every doctor dispensed his own medicines. In cities and closely settled communities this practice gradually became burdensome, and was relegated to a special class, the druggist or pharmacist; but the old time custom is still adhered to very largely among rural or country physicians.

When the "patent medicine man" made his appearance, this agent or intermediary of the physician, promptly assumed the same position towards the intruder, and united to his honorable calling of pharmacist the less honest but probably more profitable one of vender of nostrums. This anomaly would have adjusted itself in time, and, indeed, has already partially done so, but the druggist has been deflected from the straight and narrow path. Aiding a fraud, what more natural than that he should, in certain instances, become imbued with the spirit of fraud? Seeing the gullibility of the public, and knowing the profits accruing from the trade in nostrums, the less honest and more avaricious members of the guild, where henceforth but ill-content with the comparatively meager profits of their honorable and legitimate calling. The outgrowth of this spirit was the crying evil of substitution—the replacement of high-priced ingredients in prescriptions, by others less costly and totally inefficacious. There is scarcely a physician in our cities and towns who has not, at some time, had good reason to complain of this evil.

Of late the rascally practice has taken a wider range, in a direction made possible by the legitimate advances of the art of pharmacy. We refer to substitution as applied to those products of chemical and pharmaceutical skill aided by abundant capital, known as "proprietary preparations"—preparations, the nature and ingredients of which are made known to the medical profession, for whose use alone they are manufactured, and which are by no means to be classed or confounded with "patent medicines." Many of these proprietary medicines are of great value commercially, and as a result they are composed of the purest drugs, compounded with great skill. A certain proportion of the medical profession (and some of them men of wide and honorable reputations) have found these preparations good and useful, and their exhibition attended by most satisfactory results; and hence have prescribed them largely, *not the least potent reason for this fact being the feeling of security against substitution induced by the careful and often costly methods of package adopted by the manufacturing chemists.* But as "love laughs at locksmiths," so laughs the substituting druggist at seals and wrappers of unique design, at signatures and brands; and the manufacturing chemist who spends thousands and hundreds of thousands of dollars in keeping up the standard of his preparations, finds himself suddenly accused of allowing them to deteriorate, or possibly of sophisticating them for greater gain.

Without referring to them by name, we may say that very recently a number of the great manufacturing houses have found themselves in this unpleasant position; and in every instance where investigation was possible, the fact was disclosed that the apparent deterioration was due to the dishonesty of the retail druggist or prescriptionist who had substituted his own worthless compounds for those ordered by the physician.

Such substitution is not simply dishonest; it is felonious, and displays the same reckless disregard for life that marks the burglar or highwayman who is prepared to take a life if it stands in the way of his plunder. The man who does it does not simply filch a few cents from the pocket of his customer (frequently poor and needy), nor does he merely jeopardize the reputation of a physician, but he puts in peril the life of the customer who trusts him.

The honest members of an honorable profession, and fortunately they are largely in the majority,—the reputable pharmacists, owe it to themselves to expose these vultures and drive them from the trade. In doing so they should have the aid and countenance of every physician. In the meantime, let every physician not content himself with shunning the shops of those whom he detects in the nefarious habit of substitution, but boldly denounce them, and warn his patients against carrying prescriptions to them. Concerted action of this sort will soon purge the trade of the offending members.—Editorial in *Saint Louis Medical and Surgical Journal,* March, 1887.

THERAPEUTIC PROGRESS.

Salicylate of Sodium in Uticaria.—Lassar cuts short the duration and reduces the frequency of violent attacks of uticaria by twenty-four grain doses of salicylate of sodium, repeated every two hours until three doses are taken.

Aseptol.—This drug is recommended for the treatment of gingivitis and pyorrhœa. A three per cent. solution is used, and is injected between the gums and teeth every three days, for a couple of weeks. This treatment is said to reduce chronic swelling, arrest the flow of pus, restore the gingival margins to their natural shape, and cause them to be free from tenderness.

Salol in Sciatica.—Dr. V. Aschenbach, of Cortu, reports that, suffering from sciatica, for which all known remedies have been tried in vain, he at last resolved to try an unknown one—to himself, at least, unknown—as a remedy for sciatica. In the evening he took a dose of half a gram, and at midnight one gram, after which he fell asleep and remained perfectly free from pain.

Narceine.—Experiments made by M. Laborde with narceine specially prepared so as to be free from morphine and codeine appear to have given results varying from those obtained on previous occasions with what may be presumed to have been less pure preparations. This narceine was much more active than any he had used before. A dose of two centigrams caused the disappearance of insomnia in the adult; and in cases of acute or chronic catarrhal bronchitis it rapidly relieved the cough. The quantity administered can be carried to four centigrams, but it should be given in fractions of a centigram at a time. It also soothes the paroxysms of whooping-cough in children, and M. Laborde recommends its administration for this purpose in a teaspoonful dose containing one-quarter of a centigram of narceine.

SALICYLATE OF SODIUM IN GONORRHŒA.—Dr. Avsitidiski recommends salicylate of soda in gonorrhœa. The quantity he gives is thirty grains a day, dissolved in linseed tea. The way in which this acts is by being eliminated by the urine, and thus washing out the urethra with an antiseptic solution. The effect of a two per cent. solution as an injection was found to be similar to a solution of boracic acid of the same strength, rapidly changing the puriform secretion to one of a mucous character.

GLYCERINE IN ACUTE FEVERS.—Semmola prescribes glycerine diluted with water, to be taken in copious drinks during the whole day. At first fifteen to twenty grams for every twenty-four hours, dissolved in four hundred to five hundred grams of water, to which may be added a few spoonfuls of lemon juice or a gram of citric acid. The following is the formula: Pure glycerine, three hundred grams; citric or tartaric acid, two grams; water, six hundred grams. Dissolve. Twenty to thirty grams every hour. The stomach is in no way incommoded by the medicine, which has been given in doses as high as forty to fifty grams of glycerine per day without producing intestinal derangements.

HUAMANRIPA.—M. Bignon, of Lima, recently reported on this Chilian plant, who says that it possesses a deserved reputation as a specific in all diseases of the respiratory tract. An infusion is used, made from twenty-five grams of the leaves to a litre of water, which is bitter and aromatic; if made of greater strength it causes nausea. According to Dr. Zapater the infusion increases the circulation, accelerates the cardiac movements, and augments the secretions, especially the flow of saliva. In larger doses it causes vomiting, excessive perspiration, and diminishes the number of pulsations as well as the respiratory movements, and lowers the temperature. In pleurisy and inflammation of the lungs it seems to have almost a specific effect, according to this physician.

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ORIGINAL ARTICLES.

CLINICAL ITEMS CONCERNING THE TREATMENT OF TYPHOID FEVER, GATHERED FROM THE MEDICAL WARDS OF THE MERCY HOSPITAL, DURING THE SIX MONTHS ENDING MARCH 31, 1887.

BY N. S. DAVIS, M. D., CHICAGO, ILLINOIS,
Professor of the Principles and Practice of Medicine and Clinical Medicine in the Chicago Medical College.

Only about one-half of the wards and beds open for the reception of medical cases in the Mercy hospital are under the care of myself and Dr. N. S. Davis, Jr. During the six months ending March 31, 1887, thirty cases of typhoid fever were admitted and treated in our department, presenting the usual variations in severity and complications. Nearly all of these patients were from the poorer and working classes of the city population. But very few of them were admitted at the end of the prodromic stage or on first being compelled to take the bed; a larger number came during the last half of the first week of confinement; more than half of the whole number during the second week; while others were admitted during the third and fourth weeks of the progress of the disease. All of them presented more or less complete the usual symptoms characteristic of typhoid fever in its different stages of progress, which it would be superfluous to enumerate for our present purpose. About half of the cases proved mild, presenting only the usual bronchial dryness, moderate intestinal looseness and tympanites, and little or no delirium at any stage of their progress. Of the other half, several presented severe abdominal tympanites with frequent and copious stools and mental wandering, while as is usual in the colder months of the year, a large number were complicated with bronchitis and in some a limited extent of pneumonia. Our principal object at present, however, is to call attention to some items connected with the two following cases:

Mr. A. B., aged about twenty-seven years, laborer, was admitted to the hospital six or seven days after he had taken to his bed. His face was flushed, countenance dull, mind drowsy, skin dry and hot, tongue and lips dry, pulse soft and 90 per minute, abdomen only slightly tympanitic with only two or three thin stools during twenty-four hours, chest resonant and no more than the ordinary bronchial dryness. Temperature under the tongue 39° centigrade (103° Fahrenheit). The man had been addicted to the use of alcoholic drinks, but otherwise apparently healthy until the present attack.

Regarding the case as one of ordinary typhoid fever, we directed the whole cutaneous surface to be frequently sponged with cold water whenever the temperature was at 39° centigrade or above, and four cubic centimeters (one fluid drachm) of the following formula to be given every four hours:

℞.	Carbolic acid (cryst)...	.500	grms.....	grs. viii.
	Glycerine (pure).........	20.	grms.....	ʒiv.
	Comp. tinct. iodine.....	15.	grms.....	ʒiv.
	Camph. tinct. opii.......	60.	grms.....	℥ii.
	Elixir simplex.............	60.	grms.....	℥ii.

Mix.

The chief nourishment was to be sweet milk and some beef-tea or other meat broths. During the first six days after admission the most important changes in the symptoms were increased delirium, more frequent pulse, and respirations less full with steadily increasing dry râles in the chest and some dulness on percussion over the lateral and posterior part of the right side of the chest. The temperature had ranged from 38.5° centigrade to 40° centigrade for the morning and evening notings, notwithstanding the frequent sponge baths. During the first part of the third week of the fever the case presented a very grave aspect. The delirium and sleeplessness had become constant, the face deeply suffused with dark red flush; pulse 110, soft, systole of the heart short, respirations frequent and superficial, with dulness and but little expansion over the whole right side of the chest, apparently from hypostatic and œdematous infiltration of the pulmonary tissue. The temperature was 45.5° centigrade or 105° Fahrenheit at 1 P. M. The patient had been faithfully using the medicines and diet previously named with the addition of two grain doses of sulphate of quinine three or four times per day. But it was apparent that the function of the vaso-motor nerves as well as the inherent susceptibility of the tissues must be promptly sustained or the rapidly increasing pulmonary and cerebro-spinal engorgements would soon extinguish the life of the patient. He was accordingly wrapped in a cold wet sheet, and the same sprinkled with water until the temperature fell to 38.5° centigrade, the same to be followed by as frequent sponging as the temperature might indicate.

At the same time he was ordered the following medicines and diet:

℞.	Salicylate sodium	30. grms	℥i.
	Carbonate ammonia	30. grms	℥i.
	Tinct. digitalis	30. c. c	℥i.
	Simple elixir	60. c. c	℥ii.
	Aqua mentha	90. c. c	℥iii.

Mix.

Gave four cubic centimeters or one teaspoonful every two hours, diluted with water, until the delirium began to abate and then lengthened the time to three hours. To lessen tympanites and restrain the intestinal evacuations he was to take one teaspoonful of the following emulsion three times a day:

℞.	Ol. terebinth	12. c. c	ʒiii.
	Ol. gaultheria	3. c. c	♏xlv.
	Tinct. opii	15. c. c	ʒiv.
	Pulv. gum arabic Sacchar. alba } āā	25. grms	ʒvi.
Rub together and add			
	Aquæ	130 c. c	ʒiv.

Mix.

For nourishment, one or two tablespoonsful of thin well-boiled wheat flour and milk gruel every hour, and the same quantity of good coffee as properly prepared for ordinary drink, between the doses of the gruel. The treatment was faithfully carried into execution, and at my visit the next day, all the bad symptoms were moderately improved. The temperature was 1.5° centigrade lower; the face less red, delirium less active and had been interrupted by one or more brief turns of sleep; pulse and respirations less frequent, and some more expansion of the right side of the chest with inspiration, and more moist râles. The skin and the mouth were more moist. No change was to be made in the treatment, unless the temperature should fall to 38° centigrade, and the delirium cease, when the mixture of salicylate of sodium, ammonium, etc., should be given not oftener than four hours. The next day I found the patient free from delirium and inclined to sleep, breathing slower with still more expansion of the right chest, skin bathed in perspiration, face pale, extremities cool, temperature 37° centigrade, pulse 70 and weak, mouth and lips moist, abdomen but slightly tympanitic, and intestinal discharges semi-fluid and only two in the last twenty-four hours. The reduced temperature, entire absence of delirium, weak pulse and profuse sweating induced me to omit the further use of salicylate of sodium and ammonium mixture, and substitute in its place a mixture of carbonate of ammonium, tincture of belladonna and tincture of digitalis suspended in camphor water and simple syrup, given every four hours, with two grains of quinine between, and a diligent continuance of the same nourishment ordered yesterday. The emulsion of turpentine and tincture of opium to be given after each intestinal evacuation. Under these influences the sweating diminished, the pulse gained in force but not frequency, the delirium did not return, the pulmonary obstruction diminished day by day, and before the end of the fourth week of the patient's confinement, convalescence was fully established.

Case II.—Was a young man, aged about twenty-three years, occupation clerk, slender form and nervous temperament. He was admitted into the hospital at the beginning of the second week of his confinement with all the symptoms of typical typhoid fever well developed. He was given the same treatment in all respects as was ordered for Case I, when first admitted.

During the first five days after admission no unusual symptoms were noticed, except more headache and less disposition to sleep. At the end of that time a hard swelling was discovered behind the angle of the jaw in the right parotid region, the pulse increased in frequency, the mind began to wander, and the temperature rose to 40.5° centigrade (105° Fahrenheit) notwithstanding diligent use of cold sponge baths. Cloths wet in an infusion of aconite leaves and hydrochlorate of ammonia were applied over the parotid swelling, and in addition to the carbolic acid and iodine mixture, the patient was to have twenty grains of antipyrin, morning and evening.

But during the next four days the parotid swelling continued to increase, pulse 110, temperature about 40° centigrade to 40.5° centigrade, face and neck deeply flushed and hot, and so excitedly delirious that the constant attention of a strong nurse was required to keep him in bed. The antipyrin was then discontinued, emolient poultices were applied to the swelling at the angle of the jaw, and the same prescription containing salicylate of sodium, carbonate of ammonium, and digitalis ordered for Case I was given, every two hours, and frequent sponging of the whole surface continued. Milk was chiefly relied upon for nourishment. Within the first twelve hours after commencing the salicylate the patient began to be more quiet, and by the end of the third day his delirium had entirely ceased, his temperature had fallen to 38.5° centigrade or 101° Fahrenheit, pulse slower but feeble, some moist râles in the chest, and profuse general sweating. The salicylate mixture was discontinued and the subsequent internal treatment was the same as for Case I. The swelling in the parotid region, however, had undergone suppuration with some sloughing of the connective tissue. It was freely opened, drainage established, and treated antiseptically. Full convalescence from the general fever was not established until the end of the fourth week from the time the patient had taken to his bed; and his subsequent recovery of flesh and strength was slow.

The two foregoing cases were the only ones treated during the six months under consideration, that were characterized by the supervention of unusual delirium, high temperature and sleeplessness, and consequently the only ones in which we prescribed the salicylate of sodium and ammonium.

Two other severe cases, however, became complicated with hard and painful swelling of the parotid glands, commencing near the end of the second week of the fever. These were treated locally by rubbing into the surface of the swelling a little oleate of mercury and morphine twice a day, and they slowly disappeared without suppuration. Of the thirty cases of typhoid fever treated in my wards of the hospital during the six months, only one died; and he was admitted in the third week of the disease and died on the third day after his admission.

No alcoholic liquors, either fermented or distilled, were used by any of these patients while in the hospital.

STATIC ELECTRICITY IN MEDICINE.

[CONTINUED FROM PAGE 261].

BY AMBROSE L. RANNEY, M. D., NEW YORK CITY.

THE CHARGING OF A MACHINE.

It is well to know what steps are necessary to start a static induction-machine, in case it loses its charge. I have seen a few instances where the owner of such an instrument has worked himself into a heat of passion as well as of body by fruitless attempts to obtain a spark, while a patient calmly waited with expectancy for the successful termination of his feat. Some of you may have had such an experience. I suggest, therefore, that you follow the directions given, with some regard to their details:

(1) See that the *plates and charger are dry.* If not, you can easily render them so by exposing the machine to strong sunlight, and by putting an abundance of chloride of calcium in trays at the bottom of the case. This may require some hours of delay. Always open the door of the case if the sun's heat be used; and *close them tightly* (by means of the milled-screws which perforate the door) as soon as the machine regains its charge.*

(2) After you have got the plates thoroughly dry, start them in rapid revolution, by turning the driving-wheel *from left to right* as you stand facing it. Now *apply the chargers lightly near to the edge of the revolving wheels for a second or two,* and then sweep them across their face at intervals of a few seconds, until the machine starts. The poles should be approximated to within one half-inch, and the chains should not be connected with the poles.

(3) If the machine fails to start, in spite of these directions, you can then *take a piece of cat-skin* and *warm it thoroughly over a gas-jet.* Then set the wheels in rapid revolution and apply the warmed catskin as a rubber (to the plate with the buttons on it) as *close above the metal comb* as it is possible to hold it. This seldom if ever fails; but it requires the opening of the door of the case.

(4) Be sure that the *poles are well dried* with chamois-skin before the machine is put in action; also, that the poles are closely approximated but not in contact.

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*If you cannot spare the time for these procedures, a large alcohol lamp may be lighted within the case. The air may thus be heated sufficiently to temporarily render the machine useful. I am aware that I have been criticised (in a carping spirit) for offering this suggestion in print; but, as a *temporary expedient,* it oftentimes proves a valuable aid in rapidly regaining a lost charge, and rendering an induction-machine efficient.

I have frequently known the nozzle of a hot-air furnace (such as is used in giving a hot-air bath to a patient beneath the bed-clothes) to be directed into the case of an induction-machine for the purpose of drying the plates when very damp. At one time I tried to build a machine with a tube passing through the case, by means of which the air in the case might be heated indirectly without opening the door; but I found it impracticable, for many reasons.

METHODS OF APPLICATION OF STATIC ELECTRICITY.

Static electricity can be applied in several ways to a patient. Each of these methods has some therapeutic effects which are peculiarly its own. Moreover, the sensations experienced by the patient during the application are greatly modified by the method employed. For these reasons, it is necessary to go into greater detail respecting the management of a static machine than that of any other electrical apparatus in medicine with which I am familiar.

We can apply apply the static current to a patient in the following ways:

(1) By the "*indirect spark.*"
(2) By the "*direct spark.*"
(3) By the "*Leyden-jar spark*" or "*static shock.*"
(4) By "*static insulation.*"
(5) By the "*static breeze.*"
(6) By the "*static induced current.*"

THE INDIRECT SPARK.—To administer static electricity by this method, the patient is first placed upon the insulated platform, and sufficiently removed from all surrounding objects to prevent the escape of the charge from the patient to them. The machine is then connected with the patient by a chain, which is either held or simply attached to the stool on which the patient sits. The chain must be sufficiently elevated from the floor to prevent "grounding" of the current. It may be attached to

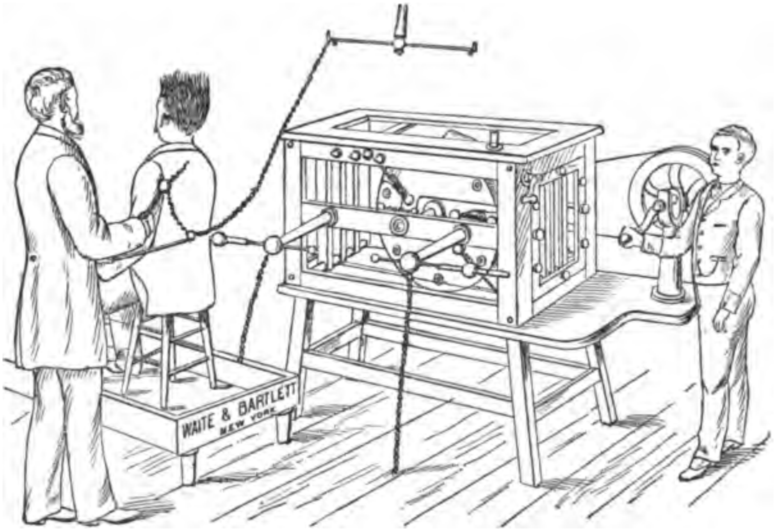

FIGURE 13.—The indirect spark.

either the positive or negative pole of the machine, according as the operator may desire positive or negative insulation. A chain is then attached to the other pole of the machine, and is "grounded." This can best be effected by attaching it to the gas fixture or a faucet attached to a constant water supply. If this is not convenient, the chain may be thrown upon the floor, when not carpeted, in case the generating power of the machine is ample.

The *poles of the machine are now widely separated* and the wheels put in rapid motion. You will notice that the hair of the patient immediately rises; and, in a dim light or total darkness, you should perceive a peculiar purplish light escaping from the tips of the finger-nails, the hair, and other parts of the body which are more or less pointed. The rapidity of this escape is influenced, (1) by the extent of the charge; (2) by the proximity of a part to some surrounding object; and (3) by the condition of the atmosphere, as regards its moisture. As the patient moves his finger-tips near the door-casing or some article of furniture not insulated, some of you may be able to perceive this escape of electricity, even in this strong light.

Now we have a condition which is known as "static insulation." If the machine is a powerful one, it may be carried to a high point. The patient happens to be charged, in this particular instance, with positive electricity, because he is connected with the positive pole of the machine.

The final step consists in presenting to the part which you wish to influence a brass ball on the end of an insulated handle. This electrode is connected, as you see, with a gas pipe by means of a brass chain. A water pipe makes an equally good connection. When this ball reaches a certain degree of proximity to the patient,* you notice that a discharge of the accumulated electricity occurs in the form of a "spark." This is known as the "indirect" spark; because the electricity takes an indirect course (through the earth) to form a circuit. It leaps from the patient and escapes to the earth down the gas-pipe or whatever grounding the electrode may chance to have.

The *length* of the "indirect" spark is directly proportionate to the *generating power of the machine*—supposing, of course, that all other factors in the application are equal (such as the humidity of the atmosphere, the completeness of insulation, etc.).

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* The length of the spark elicited depends on the power of the machine, the dryness of the atmosphere, and the perfection of the insulation of the patient. I frequently have drawn a spark of eight inches by this method.

The *volume* of the spark is modified by the *size of the brass ball* on the end of the electrode. A large ball will produce a heavier spark than a small one.

The therapeutical effects of this method of application will be discussed later. I would call your attention, however, to the violent muscular contractions which occur with each spark.

This method is somewhat painful. The withdrawal of a spark leaves a "weal" or lump, which somewhat resembles a recent mosquito-bite. They almost entirely disappear when friction is employed after the application; hence, it is my custom to rub the part with my handkerchief, if exposed, (the face or hands, for example,) after the application.

I would caution you here, in passing, against giving static sparks (by any of the three specified methods) to a patient on his first visit. You are apt to frighten a patient, unless he is well prepared for it. Again, patients grow tolerant of this method of treatment after a while; hence, you can gradually increase the volume and length of spark at successive sittings without endangering the patient's confidence in you or creating alarm. You can regulate the length of the spark by the speed of revolution of the plates of the machine.

For some hours after such an application the patient feels a sense of heat at the spot where the spark occurred. This is not at all unpleasant to many. Some patients even speak of it as agreeable.

By using a *wooden ball* in place of a brass one, a number of very fine sparks are simultaneously elicited—giving to the patient a feeling aptly compared to a "shower of sand." This electrode is admirably adapted for use about the eye or the face, although this is not the limit of its usefulness.

Finally, it is not essential to this form of application that the clothing be removed; as the finest silk or woolen fabric is not injured by it. This is a great point in favor of static application, especially in the treatment of females.

Perhaps you have noticed that I use a second electrode with a *ring of brass* attached to the insulated handle, through which the chain is passed before it is attached to the ball-electrode. This is to keep the chain away from the patient, so that sparks will not be caused at points where you do not desire them to occur. A little practice will enable you to handle both with one hand, while you turn the wheels of the machine with the other.

Sometimes it may be necessary to have the patient stand rather than sit upon the insulated platform while these applications are being made.

Let us pass now to the second method enunciated.

The Direct Spark.—By this method, the circuit between the poles of the machine includes the patient only. He sits on the insulated platform, which is connected with one pole of the machine; or one pole may be directly attached to some particular extremity of the patient, when the effects of the current are to be concentrated as much as possible upon that member. The electrode is attached to a chain, which is fastened to the other pole of the machine. The length of spark to be administered is regulated by the *extent of separation of the poles of the machine* and the speed of revolution of the plates. The further apart the poles, the longer and more severe is the spark.

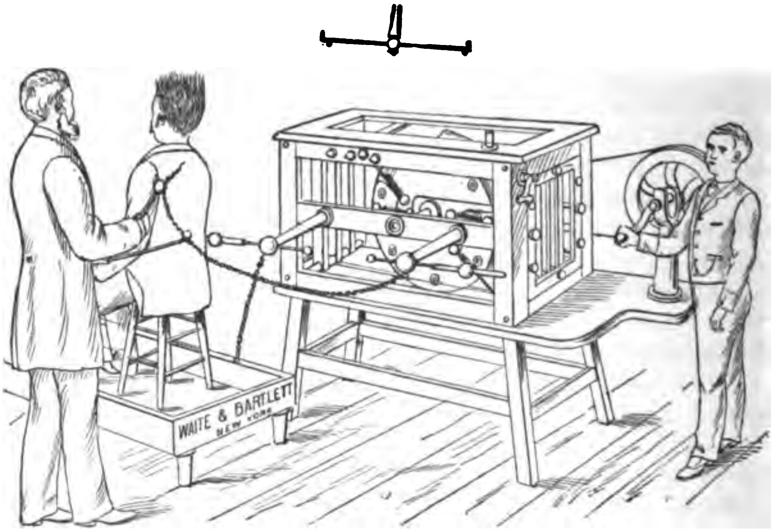

Figure 14.—The direct spark.

The ring electrode is employed (as in the former method) to protect the patient from an accidental contact with the chain attached to the electrode.

In neither this nor the method previously described are Leyden-jars employed.

I question, personally, whether the selection of the poles for the attachment of the electrode has much, if any, influence over the therapeutical action of the "direct" spark. If it has, I have not as yet clearly formulated in my own mind any deduction respecting this point.

Static Shock, or the Leyden-Jar Spark.—This method of application is accomplished by first *attaching a pair of Leyden-jars* to the poles of the machine, and *connecting their outer covering of tin-foil by a brass rod.*

The poles of the machine are then brought into close approximation; because the strength of the shock is modified, (1) by the *size of the jars*, and (2) by the *separation of the poles.*

As this method is, at best, a very severe form of application, it is well to begin with very small jars, and to place the poles as nearly in contact as possible (without actually touching each other). They can then be separated at will, as the exigencies of the case seem to demand.

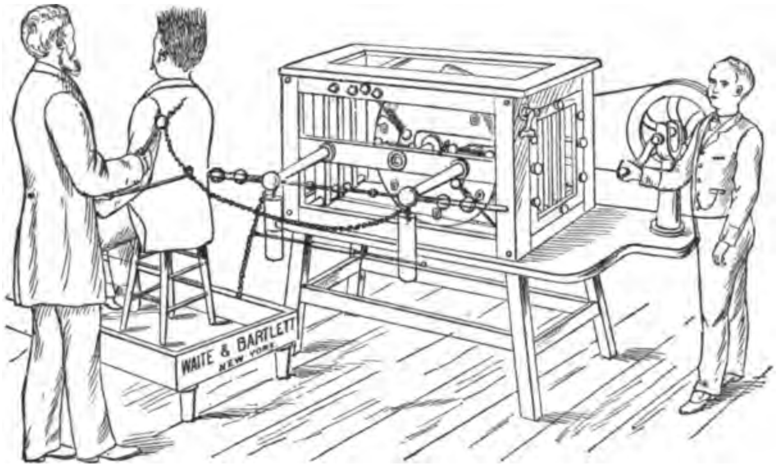

Figure 15.—Shock with Leyden-jar discharge.

The chains are arranged in a similar manner to that described in the preceding method (direct-spark application).

This method is best applied to the bare skin. The polarity of the electrode is not, to my mind, a matter of much consequence.

I advise you to handle this form of treatment with extreme caution. I have several times accidentally received a moderate static shock, and I can assure you it is not associated with pleasurable sensations.

Static Insulation.—This method has already been described in connection with the administration of the "indirect spark." It is perhaps the most agreeable of all methods of static treatment. The patient is simply charged for a variable space of time (three to twenty minutes) with either positive or negative electricity. The pole of the machine is attached to the insulated platform on which the patient sits or stands. The other pole is "grounded" by a brass chain, running to the floor, a water-pipe, or a gas-fixture.

The *poles of the machine are as widely separated as possible*, before the wheels are set in revolution.

No pain is experienced. The hair becomes erect, unless very much oiled. The patient experiences a peculiar "tingling sensation," with a tendency toward perspiration, if the administration is long-continued. If you approach the patient too closely, a spark is elicited at the nearest point. This should be avoided, if possible.

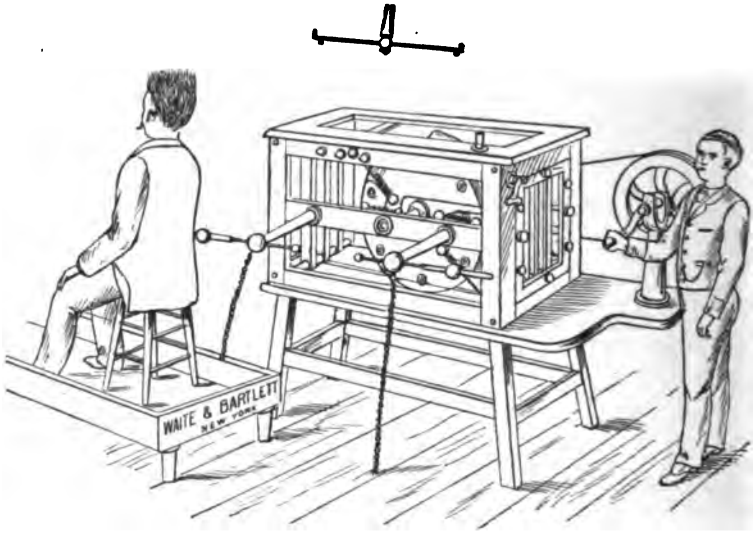

FIGURE 16.—Static insulation.

Its therapeutical effects will be discussed later.

THE STATIC BREEZE.—This method of administration of static electricity consists in the withdrawal of a static charge from a patient by means of an *electrode of metal or wood, which is pointed.*

If the breeze be *indirectly* induced, this electrode is grounded by a chain attached to a gas-pipe, a water-faucet, or placed in contact with a wood floor when the other connections are not easily accessible. The patient is first insulated (in order to retain a charge), and is then connected with one of the poles of the machine by means of a chain, which he either holds or fastens to the platform upon which he sits. The electrode is then employed.

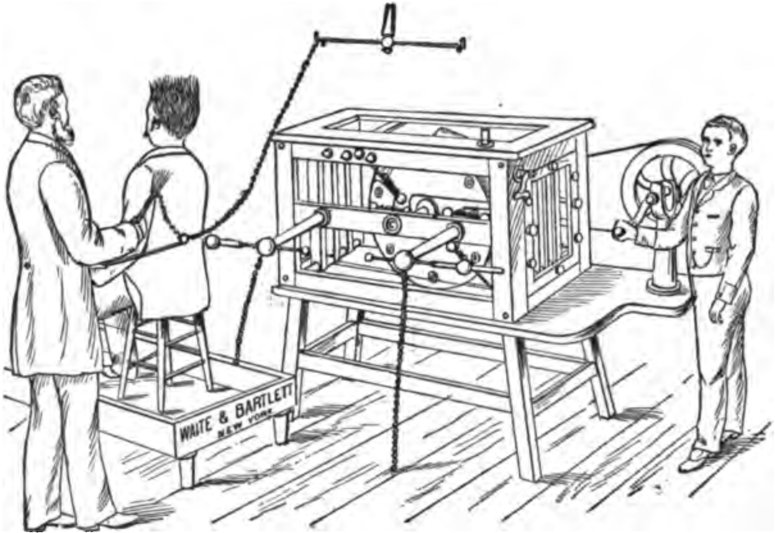

FIGURE 17.—The indirect static breeze.

When the breeze is *directly* induced, the insulated stool is connected with one pole of the machine, and the electrode with the other pole.

If the electrode be *a metal one*, the electricity is drawn rap-

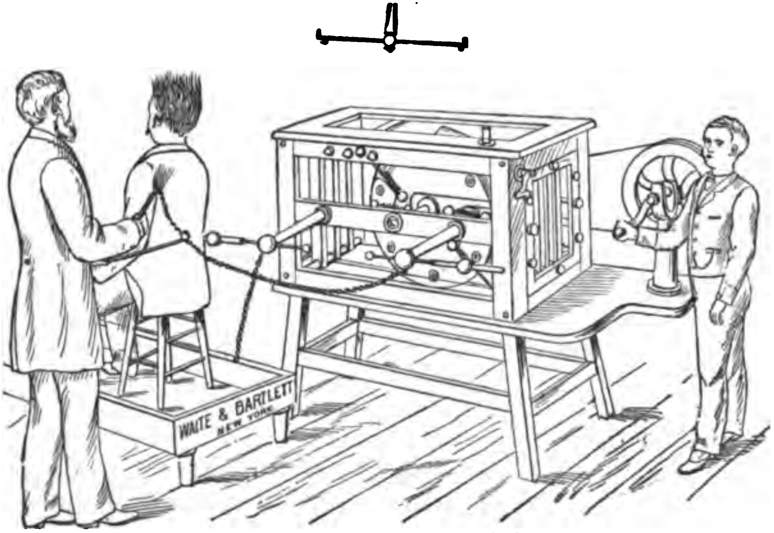

FIGURE 18.—The direct static breeze.

idly from the patient at the point which is nearest to the electrode, and a sensation resembling that of a breeze is experienced at the spot where the electricity escapes. Single or multiple points may be employed on the electrode.

In either of these methods, when the electrode is *composed of wood*, the sensation is modified, to a certain extent, by the poor conductivity of the wooden point. Most patients compare the effect of such an application to a "shower of sand" concentrated upon the point of withdrawal of the charge.

When this method is employed about the eye, the wooden ball or wooden point is usually preferable to one of metal.

When application to the head and scalp are deemed requisite, a metal cap studded with points is hung over the head of the patient by a chain, which is grounded. This cap is known as the "umbrella electrode." It should not touch the patient's head or hair, when he is placed beneath it upon the insulated platform. The numerous points of the electrode draw off the electricity through the hair and scalp, which passes from the machine to the patient, and produce a sensation which is particularly pleasant. A "strong wind" is felt permeating the hair and encircling the head.

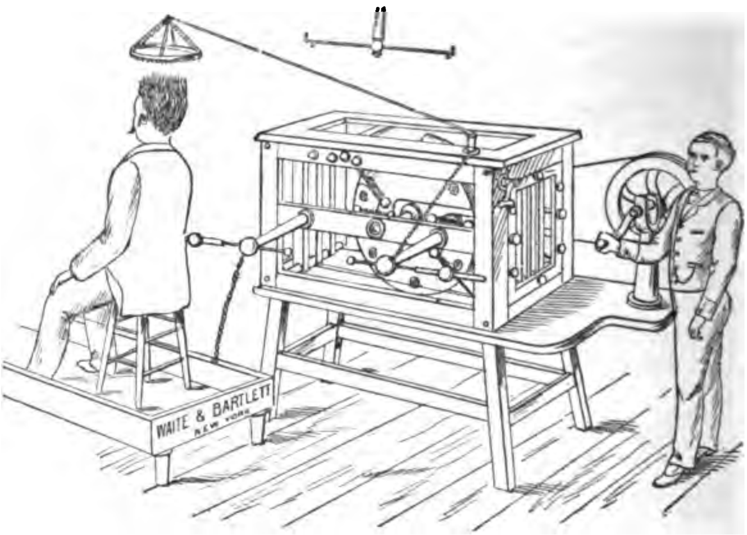

FIGURE 19.—The electrical head-bath, a variety of administration of the static breeze.

STATIC INDUCED CURRENT.—To convert a static machine into what, to all practical purposes, may be considered a "Faradaic" instrument, some slight modifications only are required.

The discovery of this method may justly be attributed to the investigations of Professor W. J. Morton, of New York; although Matteucci first devised an instrument which gave shocks by induction simultaneously with the discharge of a Leyden-jar (see Figure 795 of Ganot's work on Physics, by Atkinson).

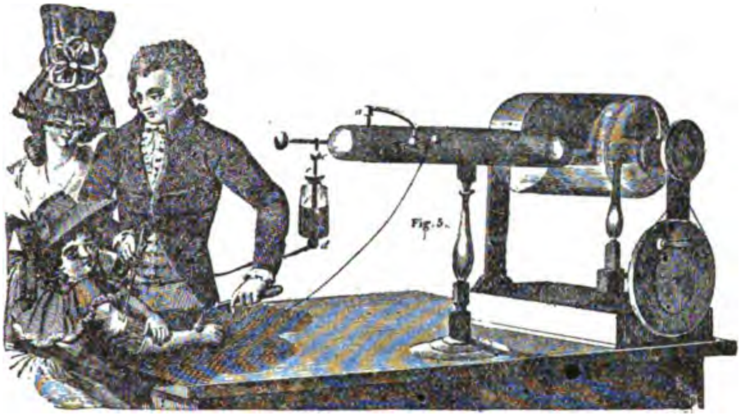

FIGURE 20.—An application of the Leyden-jar shock during the eighteenth century. Copied from an old English work.

To produce this form of current, it is necessary to first *hang a pair of Leyden-jars* upon the arms of the machine. The size of the jars employed modifies the strength of the current; hence it is necessary to have jars of different sizes as a part of a static outfit. You now attach the chains or, by preference,

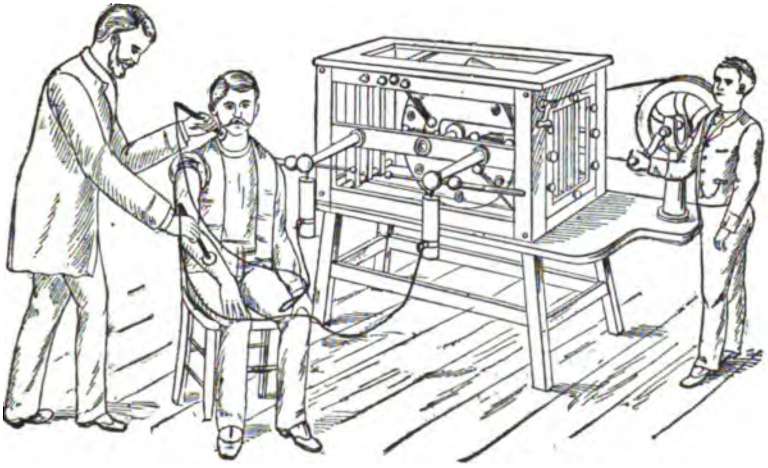

FIGURE 21.—The static induced current.

insulated wires, which serve to connect the machine with the patient, *upon the hooks that rest upon the outer coating of the jars.* Finally, you attach to the other end of each rheophore an electrode for use upon the body of the patient. The electrodes may be of metal without any covering, or ordinary sponge-covered electrodes may be employed (care being taken that the insulating handles are somewhat longer than usual).

Before the machine is set in motion, *its poles should be approximated closely.* This step is important; because the separation of the poles intensifies the current, as long as a spark will pass between them. There are two factors, therefore, in determining the strength of the static-induced current:

(1) The size of the jars.

(2) The extent of separation of the poles.

Dr. Morton has devised an ingenious electrode which allows of an application of this form of current to a patient without disturbing the poles of the machine; but it is not an essential part of a static outfit, because an interruption of the current can be accomplished without it.

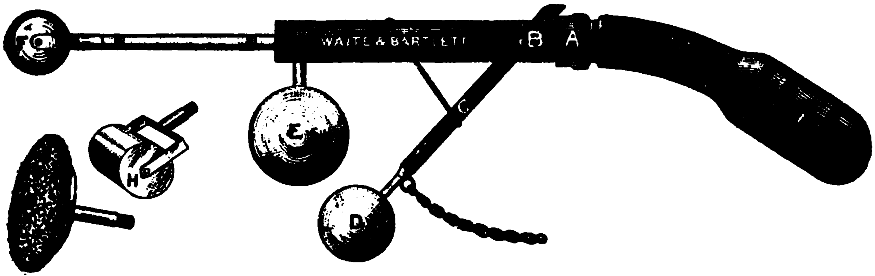

FIGURE 22.—Morton's pistol-electrode.

This electrode represents a simple mechanical means of putting into practice the method discovered by him in 1880, of converting the static electric charge into dynamic electricity or current. Electric nerve-and-muscle reactions had previously been obtained by means of the interrupted galvanic and the Faradaic currents. It had also been noticeable that the "spark" discharged on a nerve motor point, or over a muscle, produced the characteristic reactions. But the spark was painful, and difficult to direct accurately, particularly about the face and head. To avoid these objections, Dr. Morton arranged this electrode, by means of which the disruptive discharge or spark of static electricity takes place between two brass balls, one of which is in relation with the "ground," while the other is connected to an ordinary moist sponge electrode. This in turn is applied at the point desired of the patient charged on the insulated platform.

As a result, for every static discharge occurring between the two brass balls there is a dynamic discharge or current at the point where the sponge is applied, and nerves and muscles may be stimulated, or rather "irritated," exactly as by the ordinary interruptions of battery currents, direct or induced.

This electrode is another means of converting static into dynamic electricity, based upon the principle described under the name of "static induced current" by Dr. Morton.

This "static induced current," as has been already stated, was obtained by attaching ordinary sponge electrodes by their connecting rods to the outer layer of tin-foil on the Leyden-jars. The patient, in other words, replaced the usual connecting rod between these coatings. On putting the machine in motion and causing a spark between the poles, a "current" was felt by the patient, no insulation of course being required. The advantage of this method is that the ordinary Holtz machine may when required be called upon to perform the work of an an ordinary Faradaic or induction machine.

The greatest event after its discovery, in the history of medical statical electrization or Franklinism, was the invention of the Holtz or induction machine, in 1865. Next in importance, perhaps, is the method discovered and put into practice by Dr. Morton, in 1880, of converting the static discharge into a dynamic discharge or current; and the electrode represented in the above cut is the only novel electrode of any importance not bequeathed to us by the medical electricians previous to 1880.

The difference between the "static induced current" and the Faradaic current is this: The former has a *fixed polarity and direction,* and *greater electro-motive force.* It is far less painful, also, than the Faradaic current, when the electrodes are widely separated.

My attention has lately been drawn by Dr. Morton to another device of his for the preventing of the escape of sparks from a sponge-covered electrode while employing the static induced current. It consists in applying a coil of copper wire closely upon the flat surface of the metal end of the electrode which is covered by the sponge. This is done in order to prevent the concentration of the current at any one point on the surface of the electrode, while in use.

He has also been experimenting of late upon the effects of deriving currents for medical purposes from a helix of insulated wire wound upon each of the Leyden-jars of a Holtz induction-machine.

I have not yet tested the working of either of these later appliances; but I shall do so soon, when I am provided with the necessary apparatus.

[TO BE CONTINUED].

CLINICAL LECTURES.

ON THE SUTURE OF NERVES AFTER SECTION.

BY PROFESSOR RECLUS, PARIS, FRANCE.
Delivered at Hotel Dieu Hospital.
REPORTED FOR THE PHYSICIAN AND SURGEON BY SPECIAL STENOGRAPHER.

GENTLEMEN: A considerable obscurity exists still in regard to the anatomical and functional modifications that take place in a nerve that has been sectioned by accident and then sutured. What takes place when it has been joined and healed? Well, notwithstanding twenty years of patient observation by experimental physiological scientists, they do not yet accord with our practical surgical experience. You all know that the experiments made by Vulpian, Ranvier, and Tripier, on the section and regeneration of nerves, seem to show that when a nerve has been cut in man, after the fourth or fifth day it loses all its peculiar properties. It would seem that the essential element of the nerve, the axis cylinder, was destroyed.

An old observation of Béclard's seemed, however, to plead in favor of the regeneration of nerves, at least in man, and Richet, in 1867, made a suture, and found to his surprise that the sensibility returned in all the parts animated by the nerve (median). Tripier explained that this was owing to recurrent sensibility; but most surgeons thought that this was only so in very young animals. In 1883, Richelot, however, declared that suturing a nerve would not bring about its regeneration; if the sensibility persisted after section, it was owing to some of the smaller side fibres having been preserved. But Chaput, in 1884, brought forward some sixty-six cases in which there had been a complete section of the nerves, and in suturing them at least two-thirds recovered all the sensibility of the parts to which the nerves in question were distributed.

M. Segond gives the following late case: A woman of twenty-five enters the hospital, having two hours before fallen on the stairs of her house, breaking a milk-pot, which cut her arm just above the wrist deep enough to section completely all the anterior tendons and ulnar artery and nerve, and the median nerve. On examination, all the parts of the hand and fingers to which these nerves are distributed were in a state of complete anæsthesia. She could not feel a needle prick, nor even a hot stylet held on the hand, while pinching the upper parts of the tract of the nerve, above the wound, the sensation was normal, being more painful than usual. At once, without even waiting to give chloroform, the nerves were brought together and a suture of fine catgut brought them in contact, and the wound was dressed. In ten minutes afterwards the sensation had returned in the hand and fingers, and since it seems to be perfectly normal; but according to physiological science this cannot be explained, unless they consent to change their theories. So that practical surgery proves that sensibility and motility do return after the suture of the nerves that have been cut.

But let us now pass on to two late cases that will go farther. One, a girl of twenty-three, meets with an accident and cuts the median nerve, and four months afterwards she has still an insensibility of the palmar side of the thumb, of the index finger, and the next one, and a part of the palm, the muscles on this side are atrophied, and the movements of the thumb on the hand are abolished. The patient insisted on having some operation performed to relieve her, and M. Tilleaux opened the tract of the median nerve and took up the cut ends of the nerve, finding the central end swollen, while the other end was drawn out fine. They were both trimmed with a bistoury, and a needle with a Florence suture was passed through the ends, and they were drawn together; the thread was cut short, and left in the wound. All the usual antiseptic precautions were taken, and the arm kept quiet and steady. In two days afterwards the patient felt a throbbing in the fingers, and the next day she could feel a needle when it was applied to the formerly insensible parts; some two weeks after, she was quite well, and in six weeks all the usual normal sensibility had returned, so that she could do needle-work. The second operation was made on a woman of twenty-eight, who was in just the same state, except that she had been so *for fourteen years.* During this time there had been a complete loss of sensibility, and she had been told that nothing could be done for her. The suture was made as in the first case, and with as complete success. M. Polaillon has just detailed another case where the sensibility returned after suture in five hours.

These facts strike hard against the notions that we all acquired in physiology, that the regeneration of nerves was not possible, either in primitive or secondary cases; and our best physiologists say that when the immediate reunion was observed, that it was only the fibrous elements of the nerve that adhered, and that the cylinder axis, which is the essential element of conductibility, never adheres again to the other part of a cylinder axis that it may be divided from, so that any regeneration is only explained by a long theory that takes many months to accomplish; but the immediate reunion and return of sensibility are not admitted, notwithstanding the clinical facts we bring to prove it.

The secondary cases are also as difficult to explain by physiology; but whatever reason is given to explain these facts does not prevent us from taking advantage of them, so that whenever a nerve is divided, our duty is to at once proceed to suture it by a delicate Florence suture, or a fine catgut one. Then prevent all suppuration and formation of nodules or fibrous tissue, as they will prevent the functions of the nerve being again brought into action, and they will also press on the cicatrice. Even if the first suture should fail, we should again open the wound and renew it, or make another one, as Tilleaux did in one of his cases, meeting with success after the second operation.

ORIGINAL TRANSLATIONS.

FRENCH LITERATURE.

TRANSLATED BY LEONARD F. HATCH, M. D., ANN ARBOR, MICHIGAN.

ON THE TREATMENT OF OPHTHALMIC MIGRAINE: HOSPITAL OF SALPETRIERE; M. CHARCOT. BY GILES, OF TOURETTE, AND P. BLOCQ.

The principal aim of this article is to call attention to the curability of the more or less annoying accidents which occasionally accompany ophthalmic migraine, by the aid of a treatment introduced and for a long time practiced by M. Charcot in his clinics, a treatment which has actually heaped up, by its own results, a large number of therapeutic successes.

Forming a distinct entity, the ophthalmic migraine clearly differs from other headaches by many symptoms, which one could call specific.

M. Charcot distinguished two varieties of it; not only from the stand-point of the complexity of its phenomena, but also with regard to its prognostic importance. The one (simple migraine) is characterized only by some pain in the head and derangement of vision; the other (complicated migraine) presenting, besides the preceding symptoms, transitory aphasia, some sensory or motor troubles, more or less accentuated, of the face or limbs. Summing up in a more simple expression, namely, a transitory obliteration of vision, in the form of hemiopia and scintillating scotodinia, it is an annoying and troublesome affection, if the attacks are frequent.

But, as soon as it becomes the complicated, it takes an alarming aspect. In fact, when the aphasia disappears, there is a tingling sensation over the surface of the body, or a slight paralysis, and, less frequently, epileptiform seizures; and however transitory may be the course of these phenomena, they constitute, nevertheless, a serious affection. However little he may suffer between these attacks, the patient is obliged to renounce his daily occupation.

But it is not in this alone that the gravity of this condition consists. As MM. Charcot and Fere have shown, any of the ordinary symptoms of ophthalmic migraine—hemiopia, aphasia, troubles of sensibility, paralysis, after a transitory rest—are able to persist through a longer or shorter period, and even to establish a permanent condition.

In short, always troublesome, often so severe as to jeopardize travel, oftentimes hastening on permanent infirmities, such as ophthalmic migraine from a prognostic stand-point.

Inasmuch as, therapeutically speaking, it can be neglected in the first form, in all the other cases it must be vigorously fought; therefore, empirically speaking, the discovery of a medicinal agent in similar circumstances is most precious.

Observation. — Ophthalmic migraine; transitory aphasia. Bromide treatment: Guerison.

Ferdinand C., age thirty years; employed on the railroad between Orleans and Vitry, on the Seine; presented himself at the outside consultation of Salpetriere on the 22d of January, 1884.

Hereditary Antecedents. — His father died of locomotor ataxia in February, 1886, at the age of sixty-two years. His mother is very nervous. At the age of fourteen or fifteen years he had frequent attacks of migraine, with frontal headache and vomiting, without derangment of vision or embarrassment of speech. It was only in 1874 that he commenced to find a difficulty, as he expressed it, that his elocution provoked the laughter of his companions.

The day that this difficulty of speech had come upon him, he had had the migraine from three to four hours, and the approach of pain caused the aphasia to cease. Vomiting terminated the attack. Since then he has seen a luminous crescent composed of dentated lines. At the same time he had hemiopia; since then, engorgement of the right hand.

The Migraine Attacks.—The migraine attacks recur two or three times per month, but aphasia is not always produced; he has had the latter only three times. Pending the attacks he is not able to read or write.

Actual Condition: Description of an Attack.—About fifteen minutes past six in the evening one attack was ushered in by hemiopia; the visual fluid of the right side was obscured; his words were disconnected. At this time, no pain in the head.

Soon after, the patient commenced to see a vacillating point, which little by little increased, obscuring the sight of objects. Then a dentated arc, of orange color, was formed. Experiencing at the same time a painful feeling of anxiety, he closed his eyes, but continued, nevertheless, to see the orange circle. These symptoms lasted an hour, without pain in the head.

At this time he commenced to experience a slight pain in the left side of the head. Embarrassment of speech commenced immediately; transitory aphasia, which lasted about an hour. He endeavored to speak at this time, but could not comprehend the signification of words. When he tried to write, he wrote crooked, and omitted several letters. Finally, when spoken to, he did not have a clear idea of words. This second train of symptoms also lasted an hour. He then had an engorgement in the right hand, causing a sort of prickling sensation or thrill in the ends of the fingers. There was a sensation of cold in the lips and chin, on the right side. His tongue seemed to him cold, but he could speak; this sensation of cold stopped at the naso-labial ridge. Then the pain in his head was considerably increased, with a throbbing over the eyes. About two hours before morning, the patient, having vomited freely, fell asleep. An examination of the eye, as practised by Dr. Parinaud, did not reveal any persisting lesion. The patient was placed on the bromide treatment. He took, successively, two grammes of bromide each day for the first week; three grammes the second; four grammes the third; five grammes the fourth; then commenced over, and followed the same plan.

1884, February 16: Since the patient has pursued this treatment he has had no new attacks, with the exception of some slight pains in the head. His general health is good. He promised to continue the same treatment, but taking only one, two, three, and four grammes of the bromide of potassium in the same manner.

March 27: He has experienced another attack. Awaking at half-past five, he was taken with vomiting, without the usual scotodinia. At 6 o'clock he suffered the sensations of engorgement and of cold in the same localities as before. Then he lost for five minutes the power of speech. At the same time the prickling sensation was felt in the fingers of the right hand, and extended up as far as the shoulder; this lasted ten minutes. For about fifteen minutes there was a buzzing noise in the ears.

Pain then commenced in the left temple, and lasted until ten minutes of 7 o'clock; then followed nausea and vomiting. At 7 o'clock the luminous circle appeared, lasting about five minutes. The patient said that he could hear, but could not comprehend the sense of the words spoken. He could not speak himself until half-past seven. He continued the bromide treatment, using the same formula.

1885, February: The patient has not had another attack. He has stopped treatment. He has returned to the clinic since then. August 11, 1885.

February 23, 1886, and the last time May 10, 1887: He has had no return of the attacks, nor any of the isolated symptoms of his affection.

The bromide treatment, instituted in this class of cases by M. Charcot, is analogous to that which he advises in case of sunstroke.

To sum up in a sentence: The patients should be impregnated with the bromide for a long time, constantly and bravely. For a long time, since it is a tenacious and rebellious affection; constantly, because if treatment is suspended, even for a short time, the attacks commence again with greater severity than ever before; bravely, because small doses are inactive, and no danger threatens the efficacy of large doses.

These important indications are met by the following method. The patient took —

Two or three grammes of bromide every day for the first week.
Three or four " " " " " second week.
Four or five " " " " " third week.
Five or six " " " " " fourth week.

and then recommenced following the same series again. The dose is diminished or increased according to whether the attacks grow less severe or not; but treatment is not suspended until after the complete and lasting cessation of all the symptoms. The minimum duration of treatment is never less than three to four months.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.

REPORTED BY WILMOT F. MILLER, M. D., CLINICAL CLERK.

CYSTIC TUMOR OF THE NECK; EVACUATION OF CONTENTS AND INJECTION OF IODINE.

Miss H., Pokagon, Michigan, aged thirty. Admitted to the hospital January 5.

History.—In February she noticed a swelling in the side of her neck, below the jaw. At the same time a swelling appeared over the sterno-mastoid muscle. The swelling was soft and freely movable at first, but it gradually grew harder and increased in size. No pain was noticed until last fall. Since then it has continued painful to the touch, and has increased rapidly in size. She has received internal treatment, and local applications of tincture have been made over the tumor.

Condition.—There is now a large flat tumor filling the left side of the neck, involving all the space anterior to the sterno-cleido-mastoid muscle from jaw to clavicle. It is well defined, movable, elastic, and reveals slight fluctuation. The tumor extends down among the deep structures of the neck; the trachea is pressed fully one inch from its normal position.

January 6: Clinic.—Diagnosis: Cystic tumor. A small trocar and canula introduced, and more than a pint of very thin yellow fluid withdrawn. The cavity thoroughly washed with carbolic solution, and then two drachms of the strong tincture of iodine were injected and allowed to remain in the cavity.

January 8: The neck about the same size as before the operation, but it is tender and inflamed.

January 10: The swelling remains tender to the touch, and about the same size.

January 17: Examined in clinic, and the application of biniodide of mercury ordered.

January 24: The inflammation has subsided and the swelling is greatly reduced.

January 30: Presented in clinic. Several ounces of an amber-colored fluid removed, and the injection of the iodine was repeated.

February 4: Reaction from the iodine very slight; the tumor continues to reduce.

February 8: Swelling very slight. Dismissed.

INDOLENT ULCER OF THE LEG.

Mr. A. C., aged forty-two; East Saginaw. Admitted to the hospital April 3.

History.—Ten years ago a tree fell on him and fractured the bones of his left leg. Union occurred in the usual time. Six years ago his left leg became inflamed and an ulcer formed, which, under treatment, healed, and the limb remained sound for two years, when he injured his leg in the woods, producing an ulcer. This sore has not yielded to any form of treatment, and is gradually increasing in size. There is a scant discharge. The edges of the ulcer are elevated and everted. The surrounding tissues are hard and elastic. The surface of the ulcer is glazed and glistening. The integument of the leg below the ulcer is smooth and dark colored.

April 4: Clinic.—Diagnosis: Indolent ulcer. Advised rest, elevation of the foot, and application of water dressing, with antiseptic flannel bandage.

April 14: Ulcer healthy and healing.

April 16: Skin grafts applied to granulating surface of ulcer.

April 25: Ulcer closing rapidly; no discharge.

May 7: Ulcer healed. Dismissed.

PAINFUL CICATRIX.

Miss A. DeH., aged twenty-five. Admitted to hospital March 19, 1887.

History.—Father has good health; mother died of consumption. April, 1886, she noticed a swelling over the upper part of her sternum, and in January, 1887, it was diagnosed as a cystic tumor, and removed. The wound healed in four weeks; but since, the cicatrix has been the seat of sharp, shooting pains.

The scar is large, red, and very tender to the touch. General health not good; appetite poor; impaired digestion; food produces distress. She has a constant pain in her back and neck, which has followed an attack of spinal fever which she contracted four years ago.

March 21: Clinic.—Patient given chloroform, and the scar removed by oval incision made in natural integument. Wound dressed with bichloride gauze.

March 23: No pain in wound, which is healing rapidly.

March 27: Did not sleep previous night on account of pain in the wound. Sutures being removed, the wound not healed, opened slightly.

March 28: Wound closing; no pain.

March 29: Rested well.

April 14: Wound healed, but pain has returned to a slight degree.

April 17: Slight pain in wound.

April 28: No pain for some days. Dismissed.

GENERAL CORRESPONDENCE.

PARIS LETTER.

DUPRAT ON THE PHYSIOLOGICAL ACTION OF MOMORDICA BUCHA.—HUGOUNENG ON THE PRESENCE OF OXYBUTYRIC ACID β. IN THE BLOOD IN DIABETES.—MOTET ON THE FALSE TESTIMONY OF CHILDREN IN COURT.—DEBOVE ON CHLORIDE OF METHYL IN NEURALGIA.—ASSOCIATION OF SAGE-FEMMES AT VIENNA.

DUPRAT ON THE PHYSIOLOGICAL ACTION OF MOMORDICA BUCKA.

At a recent meeting of the Paris Biological Society, M. Duprat read a note on the physiological action of momordica bucha. In Brazil, the fruit of this plant is given in dropsy, either in the form of enemata by simple maceration of the fruit in water, or introduced into the stomach in the form of a liquor prepared by macerating the fruit in whiskey. Employed in injection the medicament acts as a violent drastic producing violent pains. When introduced into the stomach, it provokes vomiting. When injected subcutaneously in frogs and guinea pigs, the alcoholic extract of the fruit produced such violent local irritation that the author was obliged to renounce this method of experimenting. Introduced into a frog's stomach, a fifth of a Provaz syringe of the alcoholic extract produced vomiting in about five minutes, which ceased in the course of a quarter of an hour. Reflex movement, spontaneous movements, and the general sensibility remained unchanged, the heart-beats were likewise normal. At the end of one and one-half hours, the animal died, the heart action stopping in diastole. The necropsy revealed nothing but great irritation of the œsophagus and stomach. Two cubic centimeters of the alcoholic extract, when introduced into the stomach of a guinea pig produced the same symptoms as in the frog with the addition of diarrhœa. As a result of the experiments, the author concludes that momordica bucha acts as a local irritant, producing vomiting and diarrhœa, or diarrhœa only, according to the dose and the manner of administering it, that is to say, according as the drug is introduced through the stomach, or per rectum.

HUGOUNENG ON THE PRESENCE OF OXYBUTYRIC ACID β. IN THE BLOOD IN DIABETES.

At a recent meeting of the Paris Biological Society, M. Hugouneng communicated a note on the presence of oxybutyric acid β. in the blood in diabetes. The author had recently occasion to examine the urine of a diabetic patient that had died in the M. Lepine's ward in the Hotel Dieu hospital at Lyons. The urine of this patient contained acetone, and Külz's process enabled the author to likewise discover oxybutyric acid β. and to determine the amount per litre, which was four grammes. Oxybutyric acid β. was then tested for in the blood in the following manner. The blood was allowed to remain in contact with ether during four or five days, when the glycose entirely disappears. The mixture is then heated in a *bain-marie* and the coagulum partly dried, afterwards filtered and a known quantity of water added to it. Twenty cubic centimeters of the resulting liquid is then mixed with twenty cubic centimeters of subacetate of lead and ten cubic centimeters of ammoniæ. This mixture is then filtered and examined with a polarimeter, which shows a distinct diviation to the left in case the blood contains oxybutyric acid β. The deviation may also serve to determine the amount of acid β. contained in the blood. Thus the author found that deviation—0.°2 corresponded to 4.27 grammes of acid β. per litre of blood.

Another reaction, also, revealing acid β. is based upon its transformation into crotonic acid under the influence of dehydrating agents. The liquid that results from steeping the coagulum in boiling water is evaporated over a bain-marie nearly to dryness. An equal volume of concentrated sulphuric acid is then added to the residuum, which is then distilled in an oil bath. The distilled liquid is broken up into four or five parts according to the indications given by Külz. On cooling, crystals are deposited, which are purified in ether. Crystals thus obtained melt at 71.5° centigrade, 160.7° Fahrenheit; whereas crotonic acid melts at 70.71° centigrade, 159.27° Fahrenheit.

MOTET ON THE FALSE TESTIMONY OF CHILDREN IN LAW COURTS.

At a recent meeting of the Academy of Medicine, M. Motet read a note on the false testimony of children in law-courts. After citing several instances of false testimony of this kind, the author terminated with a few considerations on the medico-legal aspect of such cases. In a child, says the author, it must never be forgotten that its undeveloped mind is always ready to seize the marvellous side of things, that it is charmed with fiction, that it gives substance with astonishing facility to the fictions of its own imagination; that its instinctive curiosity and the influence of its surroundings, cause it to accept as true all that comes to it from these different sources. In a short time, the child is unable to distinguish between its own experience and the suggestions that have been made to it, and its memory, which alone acts, enables it to repeat, without variation, the story which it has learned. According to M. Motet, when a medical expert, after several visits, hears the same terms and the same detail, and when it is only necessary to start the child in its story to hear it related with the same unvarying succession of the most serious facts, he may be certain that the child does not tell the truth, and that it substitutes, unknowingly, acquired data for the sincere manifestation of events in which it might have taken part.

M. DEBOVE ON CHLORIDE OF METHYL IN NEURALGIA.

At a late regular meeting of the Societe Medical des Hôpitaux, M. Debove made some remarks on the use of chloride of methyl in neuralgia. Since his last communication to the Society, in 1884, M. Debove has treated one hundred and fifty cases of sciatica with this medicine, and found only one case in twenty that was not amenable to its action. Lumbago and neuralgia are cured by chloride of methyl almost instantaneously; in case of relapse, the pain easily gives way under its influence. Erythema should never be produced in treatment, the action should be rather superficial, and greatest number of nerve branches possible should be excited. Great precaution should be taken with patients affected with diabetes and albuminuria, and also with those patients whose skin is very irritable.

Out of eighteen cases of facial neuralgia sixteen were cured in this way. The medicament may be sprayed on to the face without inconvenience.

ASSOCIATION OF SAGE-FEMMES AT VIENNA.

The *sage-femmes* (midwives) at Vienna have organized an Association, under the protection of Dr. Braun, to provide for their instruction, to protect their professional interests, and to provide pecuniary assistance in case of infirmity. They intend publishing a periodical journal, to be devoted to matter concerning their special profession.

HEALTH IN MICHIGAN DURING MAY.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of May (four weeks ending May 28), 1887, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, bronchitis, consumption of lungs, intermittent fever, tonsilitis, influenza, pneumonia, diarrhœa, remittent fever, erysipelas, measles, inflammation of kidney, inflammation of bowels, whooping-cough, cholera morbus, dysentery, typho-malarial fever, inflammation of brain, diphtheria, puerperal fever, cholera infantum, cerebro-spinal meningitis, scarlet fever, membranous croup and typhoid fever (enteric).

For the month of May, 1887, compared with the preceding month, the reports indicate that cholera morbus increased, and that pneumonia, influenza, rheumatism, bronchitis, consumption of lungs, and tonsilitis decreased in prevalence.

Compared with the preceding month, the temperature in the month of May was much higher, the absolute humidity was much more, the relative humidity was about the same, the day and the night ozone were more.

Compared with the average for the month of May in the nine years, 1879 to 1887, intermittent fever, remittent fever, consumption of lungs, scarlet fever, diphtheria and diarrhœa were less prevalent in May, 1887.

For the month of May, 1887, compared with the average of corresponding months for the nine years, 1879 to 1887, the temperature was higher, the absolute humidity, the relative humidity and the day ozone were more, and the night ozone was less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of May, 1887, at thirty places, scarlet fever at thirty-two places, typhoid fever at four places, measles at fifty places.

Reports from all sources show diphtheria reported at five places more, scarlet fever at seven places less, typhoid fever at four places less, measles at fourteen places more in the month of May, 1887, than in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, June 2, 1887.

HEALTH IN MICHIGAN DURING JUNE.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of June (five weeks ending July 2), 1887, as follows, the diseases being arranged in the order of greatest prevalence:

Rheumatism, neuralgia, intermittent fever, diarrhœa, bronchitis, consumption of lungs, tonsilitis, remittent fever, erysipelas, influenza, cholera morbus, inflammation of kidney, pneumonia, measles, inflammation of bowels, whooping-cough, dysentery, cholera infantum, inflammation of brain, puerperal fever, typho-malarial fever, cerebro-spinal meningitis, diphtheria, typhoid fever (enteric), scarlet fever, membranous croup.

For the month of June, 1887, compared with the preceding month, the reports indicate that diarrhœa, cholera morbus, intermittent fever, and cholera infantum increased, and that pneumonia, influenza, bronchitis, tonsilitis, and measles decreased in prevalence.

Compared with the preceding month the temperature in the month of June, 1887, was higher, the absolute humidity was more, the relative humidity was slightly more, the day and the night ozone were less.

Compared with the average for the month of June in the nine years, 1879 to 1887, neuralgia increased, and intermittent fever, remittent fever, consumption of lungs, scarlet fever, diphtheria, and bronchitis were less prevalent in June, 1887.

For the month of June, 1887, compared with the average of corresponding months in the nine years, 1879 to 1887, the temperature was slightly higher, the absolute and the relative humidity were slightly more, and the day and the night ozone were slightly less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of June, 1877, at thirty-nine places, scarlet fever at forty-two places, typhoid fever at twelve places, measles at thirty-six places, smallpox and typhus fever each at one place.

Reports from all sources show diphtheria reported at nine places more, scarlet fever at ten places more, typhoid fever at eight places more, measles at fourteen places less, and smallpox and typhus fever each at one place more in the month of June, 1887, than in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, July 7, 1887.

EDITORIAL PERISCOPE.

THE ESTABLISHMENT OF A CLINICAL DEPARTMENT OF THE UNIVERSITY IN DETROIT.

Many of our readers have seen statements in the secular press that the removing of the State Hospital located at Ann Arbor, to Detroit, is receiving the thoughtful attention of the University authorities and the medical profession of the latter city. The impressions conveyed by the newspaper articles that have appeared, are not perfectly correct. The object which is contemplated is not the removal from Ann Arbor of anything now established, but is to add a complete clinical department to the University medical school.

The establishment of such a department is believed by its advocates to be the solution of the problem: How to provide increased facilities for clinical instruction in the medical department of the University of Michigan?

The project involves the union of the Detroit College of Medicine with the medical department of the University, and the formation of a full corps of clinical instructors from the teachers of the two schools.

Can this be accomplished? And if so, will it benefit the students of the University, the medical profession, and the people? In answer to the first question, we believe it can, and that the Regents will find no great difficulty in the way but will receive many encouragements from various sources.

The *American Lancet* for July contains an editorial on the subject under the heading: "*The Medical Colleges of Michigan—Shall they be united into one college?*" After pointing out the objects of the scheme it adds: "If the movement is to benefit the profession, it is all right; if it is simply for the benefit of individuals at the expense of the profession, it is all wrong."

We agree with the editor of our esteemed contemporary and in reply to his statements, will answer our second question.

We believe the motives of those advocating the movement are true to the best interests of the profession. They want it for the benefit of the profession, and, not only for the benefit of the profession, but for the benefit of the people. It will require perhaps a sacrifice on the part of some interested individuals, when the arrangement is made, but the interests of the profession and of the people are more important than the private interests of individuals, so that the inconvenience of a few persons should not be made an opposing factor.

Arguments are not needed to support the statement that any medical school that takes the lead, at the present day, must provide a long and complete course of study; must not only exact from its students proficiency in the fundamental branches of medicine, and provide for special training in laboratories that are essential to obtaining this proficiency, but it must give them that practical experience in the diagnosis and treatment of disease, only to be secured in large and well equipped hospitals.

It is well known by the profession that this state contains two medical schools. The one at the University provides for a drill in the elementary branches and laboratory work, not excelled, probably, by any medical college in this country. But its hospital advantages are inferior to that afforded by many others. It is not as proclaimed by some, destitute in this particular. In some of its clinics it is particularly rich, but the location of the school is unfortunately such as to render it impossible to supply certain classes of cases in sufficient numbers to meet the requirements of a complete course of clinical instruction. This has always been recognized as a serious defect and has led many students to take their last course of lectures in metropolitan schools. Since the hospital has been established, and the present clinics built up, this has not been so frequent of late years, for the University graduates a much larger proportion of its medical students than it did in those early years its history.

The other school, located in Detroit, occupies a position, where, by a suitable effort, abundant clinical material of all kinds, and also extensive hospital facilities can be secured. This school lacks, however, the laboratory advantages, and the corps of salaried teachers essential to impart to its students those fundamental principles, without which they cannot fully appreciate or profit by their clinical or hospital instruction.

As between the two, we must declare in favor of the former, A thorough drill in the fundamental principles is more important, and the graduate sent forth with a fixed knowledge of these, may in the future supply the defects in his clinical instruction, while defects in primary branches are seldom, if ever made up in after years.

It is practicable in Michigan, at the present day, to unite the two schools, so that each may supply the defects of the other, and create a medical school that shall not only benefit, but command the respect and admiration of the profession, and offer to the student facilities not surpassed by any school in the country. It will also enable the University to retain and graduate most of the students that now leave and become alumni of other medical schools, when they would prefer a diploma with the seal of the University upon it.

Which is better for the profession—to have *two* defectively equipped rival colleges, or *one* well equipped school, that shall fully satisfy the requirements of the times, and to which the profession can point with pride and look upon with satisfaction?

The question of supplying increased clinical material is not a new one. It has stared the Regents and the medical faculty in the face ever since the organization of the medical department.

So long ago as 1857 a committee of the Board of Regents was appointed to consider the advisability of removing the whole medical department of the University to Detroit. And we are told by Miss Farrand, in her "History of the University," that the want of sufficient means was the chief consideration which influenced them to decide against it. At that time Dr. Palmer, then as now, a professor in the University, was a most active advocate of the measure, and by turning to the files of the *Peninsula and Independent Medical Journal,* of which he was editor, pages 160–166, and 307–312, of Volume I, his views will be found expressed in a most forcible and convincing manner, and, some of the predictions which he then made as to the difficulty of supplying these defects, have been found by experience to be true. Again, in 1867, the Doctor expressed similar views, and opened negotiations for the fulfillment of what he declared to be the greatest need of medical education in the West, and one of his most cherished desires. But the times were not ripe as now, and the facilities did not then, as now, exist for the establishment of a complete medical college. There was no graded course in the University, and any change then considered involved the removal of the whole medical department. In that case there would have been lost to the students the advantage of a quiet place to study, and association with kindred sciences during the time when his attention should be turned chiefly, if not wholly, to mastering the fundamental principles which should constitute the foundation of his medical education. There was, moreover, the danger that has been fully recognized in all medical schools, that when the clinical instruction and the hospital were brought into too intimate relation with the other studies, the student, allured by the charms of brilliant operations, would neglect his laboratory work, and primary reading, and waste the time that should be devoted to them in the clinical amphitheatre or the hospital ward. This has always been a disadvantage complained of by thoughtful teachers in medical schools, and led some good friends of the University, among them Dr. Zina Pitcher, of Detroit, to oppose the removal of the whole department as a measure that contained an element of evil as well as of good.

At that time Detroit was a small city, it was almost destitute of hospitals, having none that would compare favorably with those of the large cities of the East. These unfavorable conditions no longer exist. The University has had a fully established graded course of study in its medical department for several years. Its first year students are not allowed to attend the clinics; its second year students are granted this privilege only four hours a week; and, only in the senior year, when all the fundamental courses have been completed, are they allowed to give full attention to the clinics, and the so-called practical branches. This is a condition of things that was devoutly wished for by Dr. Valentine Mott, John Draper and others in the school with which they were connected.

Detroit is now a large city, it has large hospitals which will compare favorably with those of any city, and are more than ample for a first class medical school. By establishing a course of clinical instruction in connection with those hospitals, the Regents can supply all the defects that have ever been pointed out and urged against the medical department of the University.

It has suffered from this lack of clinical facilities from the very day of its establishment, and it will suffer more and more, as the tendency on the part of medical schools is to develop their clinical resources, and they are doing so, year by year. These facts have long been recognized by the profession of this state. At the meeting of the State Medical Society in 1873 a committee was appointed to confer with the Board of Regents and the medical faculty of the University upon this very subject. The committee appeared before the Regents and the faculty in June, 1873, and submitted a report which can be found in the printed transactions for that year, pages 151–164. They declared that those having charge of medical schools should diligently furnish every possible means whereby knowledge may be obtained. And further that:

"The chief importance and chief function of a medical school consists in an instruction which books cannot give. Books cannot demonstrate anatomy, neither can books furnish clinical instruction in medical practice, in surgery, nor in obstetrics. The student's eye, ear, touch, smell, taste,—his hand, his bodily attitudes, and his facial expression, all need to be educated and trained; and this is an education which books cannot give, and which can be obtained only from that practical instruction which constitute the distinguishing excellence of our best schools. Scholastic instruction may be ever so perfect, ever so attractive; if the school lack these essential elements of practical instruction, it does not meet the wants of the profession nor the requirements of the age. The older we grow in the profession and the more we study its practical wants, the more we become impressed with the importance of the demonstrative or practical instruction of its students."

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"We dismiss this point with the remark that the best medical school possible for Michigan will never be realized until it is located in the largest city we have, and by the side of the largest and best conducted hospitals we have. The pre-eminence of the New York and Philadelphia schools on this continent, and of the London, Edinburgh, Dublin and Paris schools on the European, is due, not so much to the pre-eminent ability of the men who have taught in them, as to the fact that the cities themselves have furnished the hospitals that made good instruction possible to the student and a private practice which was profitable to the professor. Paltry salaries, gentlemen, and the honor of professorships, alone, will not command the best talent; but when a school is located in a field worthy of a large ambition, more salary becomes of little account; because the honor and distinction of a professorship will bring with them, in such a field, a practice much more important than the salary. There are, too, in the teachings of a professor crowded by practice, a life, a vim, a magnetism, a power and practical value which cannot be found in the elegant essays or the learned lucubrations, oft repeated, of the learned scholastic."

This committee looked to the Regents to supply such a medical school in the University, for the reason that it was a part of the State educational system, provided especially to meet the wants of the medical profession, and in closing their report made the following appeal:

> "Gentlemen of the Board of Regents, and of the Medical Faculty: Our plans for the advancement of medical science and medical policy are before you. The profession looks to you for assistance. By giving it, you may secure the cordial sympathy and the abiding confidence of a body of men, whose good will is the very corner-stone of your medical department, and the very breath of whose censure is its destruction. We come to you, first of all, gentlemen, because you represent an institution which is a part of our State; because this institution is expected to endorse and espouse all proper and practicable plans for the advancement of the general and technical education of the State; because, as citizens, we have an interest here, in common with all other citizens of the State; and also, because as professional men we shall be proud to know that the University of Michigan has helped to inaugurate a greatly and long-needed reform in the culture and practice of medical science in the United States."
>
> "We have asked of you nothing chimerical or impracticable. Our idea of the best medical school possible, at this time; for Michigan, is not based even on the realities of New York or Philadelphia, but on your own known resources and capabilities, and on the willing co-operation of a noble profession and of a liberal people, who only wait to follow where you dare to lead."

We have introduced these extensive quotations, because the report is the authoritative expression on the part of the profession of the State; and may be considered as *their* answer to the editor of the *Lancet* as to whether this movement is to benefit the profession. The committee that framed the report consisted of Drs. Pratt, Brownell, Barnum and Hitchcock. It was indorsed by the society at its next meeting, and was ordered to be printed as an appendix to the proceedings of the society.

We consider these declarations a conclusive answer to the question raised by the editor of the *Lancet*, and we have not heard or seen a valid argument against the good results of the movement. Two years ago its most active present opponent declared: "That those who advocate the plan have the best of the argument." Neither he nor any one else who are counted among its opponents have produced what seems a valid reason for their opposition.

If the Regents do not avail themselves of the opportunities which are at present offered to build up the medical department and heed the request of the profession of the State, it will be because the good of the profession, the interests of the people, and the prosperity of the medical department of the university, are *sacrificed* to the private interests of a few individuals.

CONDENSATIONS.

Dr. Austin Flint has been appointed visiting physician to Bellevue, in place of the late Austin Flint, Senior.

Professor Billroth's strength has been sufficiently restored to enable him to remove to his country house.

Dr. Ashurst recently appointed surgeon-in-chief to the Pennsylvania Hospital, is likely, says the *Saint Joseph Medical Herald*, to cause trouble by attempting to abolish antisepsis in the wards of that hospital.

Retention of Urine, when not relieved by a sudden dash of cold water, or by a piece of ice in a napkin on the suprapubic region, is often amenable to the application of ice to the perineum, or its introduction into the rectum.

Prickley Heat.—A writer in the *Saint Louis Medical and Surgical Journal* says a two per cent. solution of sulphate of copper applied to the skin and allowed to dry on will cure in a few days. It should be used night and morning.

Pneumonia.—Early in the case, Dr. Gross would bleed the patient until the pulse became soft, and follow this by aconite, veratrum, or gelsemium. He would give an active purge, perhaps of the compound infusion of senna, four ounces; would combat the hyperpyrexia with quinine or antipyrin, and would place poultices to the chest.

Ice Poultices.—*Technics* proposes the following method: Spread a layer of linseed meal, three-fourths of an inch deep, on a cloth of proper size, and put pieces of ice the size of a marble on the meal at intervals of an inch; then sprinkle lightly with the meal; cover with a cloth and turn over the edges. Apply the thick surface to the skin. The meal protects the skin and excludes the air from the ice, thus preventing melting.

The Cost of Medical Education in France.—The fees formerly exacted from students in France, on their taking up their inscriptions for lectures, were abolished to a great extent many years since, but have recently been once more made compulsory. The result will be to augment the expense of the medical curriculum by a third (eight hundred and eighty francs to thirteen hundred and sixty francs), and the change has not unnaturally given rise to a good deal of angry feeling among the students who began their studies under the former *regime*. A certain proportion of the students will be exempt from the surcharge for the present year, but there is no ground for hoping that the petition which has been presented to the Chamber of Deputies for the maintenance of the *status quo*, will be acceded to. Even with this increase, the cost of medical education in France will bear very favorable comparison with the large fees prevalent in this country.

ACTION OF ANTIPYRETICS.—In a recent lecture on the treatment of typhoid fever, Professor Nothnagel, of Vienna, made some interesting remarks on the relative action of certain antipyretics when administered for the purpose of reducing temperature in that disease. The Professor laid it down as an axiom that the more energetically and rapidly a "chemically acting antipyretic" reduces the temperature, the more marked are certain phenomena which have been recognized as concomitant symptoms, and under some conditions as dangerous concomitants of the natural reduction in temperature of the crisis. This is seen very markedly, for instance, when such a substance as resorcin or kairin is administered: the temperature falls rapidly; the patient sweats profusely; a pulse and cardiac action are set up that suggest collapse, or there is even collapse; afterwards the temperature rises again with a rigor or chill. The same appearances may be observed after the administration of thallin, antipyrin, or antifebrin, which he considers to be about equal as antipyretics—but not to so great a degree. The temperature after the administration of one of these does sometimes falls, with more or less pronounced symptoms of collapse, but not always, nor even as a rule. This may depend partly on the size of the dose, or partly on individual susceptibility. Professor Nothnagel, therefore, denounces as incorrect and unphysiological the practice of introducing a new antipyretic with the statement that it produces no disagreeable bye-effects, since the most that can be justly claimed for any of this class of antipyretics is that such symptoms following its use are relatively infrequent. With quinine the fall of temperature is still less rapid, the effect is more lasting, and the subsequent rise, when it occurs, takes place more slowly; whilst the objectionable symptoms are practically absent.

NEW PUBLICATIONS.

A PRACTICAL TREATISE ON OBSTETRICS. Four volumes. By A. Charpentier, M. D., Paris. Illustrated with lithographic plates and wood engravings. "Cyclopedia of Obstetrics and Gynecology" (twelve volumes), issued monthly during 1887. New York: William Wood & Company.

The popular medical publishing house of William Wood & Company have again shown their enterprise in giving to the profession a translation of Charpentier's great work on obstetrics. It is being published in twelve volumes, issued monthly.

The French edition of this work appeared four years ago, and is the most complete work on obstetrics in any language. It does not merely represent the French school, but is a faithful and unbiased mirror of the theories and of the practice of the most renowned obstetricians of the world.

The translation was made under the supervision of Professor Egbert H. Grandin, M. D., who has noted the changes that have been made since the publication of the original, and has added new matter requisite to bringing the work up to date. And when it has seemed to him that the author has stated methods not completely in accord with the opinion of the authorities on this side of the Atlantic, the editor has made correcting criticism.

Volume I treats on Anatomy of the Genital Organs; Menstruation and Fecundation; Normal Pregnancy and Labor.

The anatomical description covers in an exhaustive manner the bony pelvis, its surrounding and contained soft structures; muscles of the abdomen, pelvis, and perineum; aponeuroses of pelvis and perineum; internal genital organs, with bladder, urethra, and rectum; external genital organs. Much of this description is taken from the work of Dubois and Pajot In the consideration of these subjects the text is divided into four parts: I, Anatomy; II, Physiological Phenomena; III, Pregnancy; IV, Labor.

The second part details the nature, processes and phenomena of puberty, nubility, ovulation, menstruation, fecundation, and artificial impregnation.

Parts three and four constitute the major portion of the volume. Pregnancy is studied in two great divisions: (1) Local and general phenomena caused to the mother by gestation. (2) Development of the ovum and formation of the fœtus. There is first considered the organic and functional changes in the pelvis and the generative organs. The section on impregnation and conception, which gives a general account of mammalian development, is the article contributed by Professor Marshall to "Barnes' System of Obstetric Medicine and Surgery," which has been substituted for the section on Embryology in the original work. The section on Labor treats very fully: On the phenomena of labor, which are divided into two classes, physiological phenomena and mechanical phenomena; on presentations; on the influence of parturition on mother and child; duration of labor; care of the mother and infant during labor; anæsthetics in normal labor; care of the patient immediately after labor; care of the new-born infant; apparent death of the new-born infant; the normal puerperium; management of the normal puerperium; and, care of the new-born infant.

Volume II: The opening chapter of the second volume considers diseases affecting the pregnant woman, independently of the gravid state. The pregnant woman may be affected by any disease, but works treating on these diseases do not consider what special influence they may have upon her. These diseases are here reviewed, and the reciprocal action noted, which they and pregnancy have to one another. Eruptive fevers seem to acquire an unusual severity in pregnant females, and small-pox seems to rank first in this regard. The treatment consists in re-vaccinating all pregnant women, for it is regarded as conclusively proven, that vaccination is harmless to both mother and child.

The second chapter gives a very detailed study of *diseases of pregnancy*, which constitute the functional disturbances that find expression in a series of morbid conditions, due to the important and profound modifications of pregnancy. The classification of Desormeaux and Cazeaux is adopted, and in turn are reviewed the disturbances of digestion, of circulation, respiration, secretion, excretion, locomotion, and, finally, of the sensory and intellectual function.

Vomiting of pregnancy is classified as *simple* and *uncontrollable*. Vomiting is regarded as uncontrollable "whenever it affects seriously the health of the woman and resists the judicious use of a certain number of remedies." This form is considered under three stages.

The first stage includes the course of the disorder, until the fever becomes continuous. The second stage is then reached. The third stage is marked by cerebral and sensory disturbances. The treatment, dependent somewhat upon the stage, consists in attention to diet and hygiene, in medical, surgical and obstetrical treatment. The last consists in the induction of abortion in preference to premature labor.

In this section of the work the editor adds many valuable hints, and frequently gives, in comparison, views of American authorities.

The third and fourth chapters deal with *diseases of the ovum*, and of the fœtus, respectively. The ovum is made to include the membranes peculiar to it, and the decidua, as well. As yet there is little known about these diseases, but during recent years some progress has been made in that direction, and many of the malformations and anomalies are being understood and explained.

Chapters five and six deal with *Miscarriage* and *Extra-Uterine Pregnancy.* Much valuable and instructive data are given in this portion of the work.

The volume throughout, dealing with subjects but briefly treated in the ordinary text-book, and considering them at length, places a class of material at the hands of the average reader that cannot fail to be of interest and profit to him.

A TEXT-BOOK OF MEDICINE FOR STUDENTS AND PRACTITIONERS. By Dr. Adolf Strumpell, formerly Professor of and Director of the Medical Polyclinic at the University of Leipsic. Translated by permission from the Second and Third German Edition by Herman F. Vickery, A. B. M. D., Physician to Out-Patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School; Fellow of the Massachusetts Medical Society, etc., and Philip Coombs Knapp, A. M., M. D., Physician to Out-Patients with Diseases of the Nervous System, Boston City Hospital; Physician to the Department for Diseases of the Nervous System, Boston Dispensary; Fellow of the Massachusetts Medical Society, etc., with Editorial Notes by Frederick C. Shattuck, A. M., M. D., Visiting Physician to the Massachusetts General Hospital, and to the Good Samaritan; Instructor in the Throat Theory and Practice of Physic, Harvard Medical School; Member of the Association of American Physicians, Fellow of the Massachusetts Medical Society, etc., with one hundred and eleven illustrations. 8mo: nine hundred and eighty-one pages. Cloth. New York: D. Appleton & Company, 1887.

This work first appeared in the German in 1883. Since then it has passed through three editions, which tells the high favor in which it is held there, and its appreciation in this country is shown by being adopted as the text-book in the theory and practice of medicine in Harvard University.

The high literary and professional standing of the editor and the translator of the American edition is sufficient guarantee that the quality of the text has not suffered in the change of language. The classification of diseases adopted by the author does not differ materially from the general plan adopted by American writers. He considers first the acute general infectious diseases in which he includes erysipelas, diphtheria and dysentery. The second part of the work treats of diseases of the respiratory organs; the third those of the circulatory organs; the fourth of digestive organs. The fifth of the nervous system; the sixth of the urinary tract; the seventh of the organs of locomotion; the eighth on diseases affecting the blood and tissue metamorphoses.

In the treatment of typhoid fever mention is made of the internal use of carbolic, salicylic acid and iodine, with the view to destroy the specific cause of the disease within the system. Regarding the question of fever, the internal antipyretics are considered almost indispensable, but baths are claimed to be more efficient. The author is a strong advocate of the bath. "There is at present," says he, "no other single method of treating typhoid fever which has so numerous and evident advantages for the patient." The pathological characteristics of a croupous and a diphtheritic exudate and membrane are clearly stated; the former being an exudate which forms on the mucous membrane; the latter an infiltration with necroses of the tissues. On the subject of treatment of diphtheria nothing new is offered by the author; the editor believes that the tincture of the chloride of iron is of real service. Phthisis is considered contagious and prophylactic measures strongly recommended. Three hundred pages of the work are devoted to the diseases of the nervous system. On this section we feel that Professor Shattuck, the editor in the preface of the American edition, pays a merited tribute. "I am acquainted," he says, "with no work which treats of the diseases of the nervous system, in our knowledge, of which advance has been so rapid of late years, so fully, concisely, and clearly."

The work throughout possesses the qualities of conciseness and clearness. The general principles governing treatment are full, but the details of treatment of some diseases are brief to a fault; but where this brevity exists, or where the "details of treatment are not precisely those generally current in this country," the editor has made interpolations supplying the omissions, and giving the treatment of American authorities. The pathology gives us all that is recent, to the limit of facts, unconfirmed theories and hypotheses being omitted or passed with a brief reference.

While numerous works on practice have recently appeared by American authors, the special fitness of this treatise as a textbook ensures that it will rapidly become a favorite with both student and practitioner.

DISORDERS OF MENSTRUATION—A PRACTICAL TREATISE. By John N. Upsur, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Virginia, Richmond, Virginia. 12mo: two hundred pages. Cloth. New York and London: G. P. Putnam's Sons, 1887.

The author has written this little work in a very clear and interesting style. Facts, references, quotations, and argument are connected in a way that the book is read with a degree of pleasure that is not often experienced in reading "Student's Manuals." Well known facts are presented in a manner that they seem new or at least they come with new interpretations and applications. Many valuable hints are dropped so closely associated with important conclusions that they are not passed over unnoticed. These broad principles, anatomical, physiological, and hygienic, the violation of which, is the cause of most of these disorders, are not assumed to be understood but are constantly employed to explain the results that follow their alteration, derangement or violation. The work is full of information that is valuable to both student and physician.

THE NURSING AND CARE OF THE NERVOUS AND THE INSANE. By Charles K. Mills, M. D., Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine; Neurologist to the Philadelphia Hospital; Consulting Physician to the Insane Department of the Philadelphia Hospital; Lecturer on Mental Diseases in the University of Pennsylvania, etc. Practical Lessons in Nursing. 12mo: Extra cloth, $1.00 each. Philadelphia: J. B. Lippincott Company. 1887.

The above work is one of a series of four published under the common title of "Practical Lessons in Nursing." The preface to this volume tells us that its contents are the substance of a course of lectures delivered first at the Training School for Nurses of the Philadelphia Hospital, and subsequently at the Woman's Hospital Training School for Nurses, of Philadelphia. The place which this little book fills had not been occupied. It supplies a want that is keenly felt by nurses who are called upon to take care of nervous and insane patients. "In no class of cases is it more important for a nurse, care-taker, or companion to have good principles of action and clear notions of practice, than among patients suffering from nervous or mental affections." The truth of this statement is not always appreciated by the physician, and the failures in the treatment of many of such cases is due to the want of properly carrying out the necessary elaborate treatment in the absence of the physician. From this fact the book can be read with profit by physicians who have not had special experience with this class of diseases.

The work contains instructions for the management of hysteria, hysterical and epileptic seizures; the general management of epileptics; forms of insensibility; care of cases of chronic organic nervous diseases; sleeplessness; delirium; diet; the alcohol, opium, or other narcotic habit; massage; bathing; surface thermometers; forms of electricity; the management and care of Faradic and galvanic apparatus; hints, cautions, and contradictions in using electricity; methods of applying electricity; the nursing and care of the insane.

We have said that for the nurse this little work fills a want, and for the physician it will serve a good purpose. To them we most heartily commend it.

THE ESSENTIALS OF HISTOLOGY, DESCRIPTIVE AND PRACTICAL, FOR THE STUDENTS. By E. A. Schafer, F. R. S., Jodrell, Professor of Physiology in University College, London; Editor of the Histological Portion of Quain's Anatomy. Octavo: two hundred and forty-five pages. Philadelphia: Lea Brothers & Company, 1886.

This admirable work was greatly needed. To those who are familiar with the second volume of "Quain's Anatomy" or with the author's former "Course of Practical Histology," this work needs no recommendation.

The book has been written "with the object of supplying the student with directions for the microscopical examination of the tissues," which are given in a clear understandable way. Although especially adapted for laboratory work, at the same time it is intended to serve as an Elementary Text-book of Histology, comprising all the essential facts of the science, but omitting unimportant details, the discussion of which is only calculated to confuse the learner.

For conveniently accompanying the work of a class of medical students the book is divided into forty-two lessons. Each of these will occupy the student from one to three hours according to the extent to which the preparations are made before-hand. The author has recommended only those methods upon which long experience has proven that full dependence can be placed. The strict observance of this plan permits of no doubt and makes the work eminently satisfactory, and one that will be appreciated by the beginner in microscopy, and student of histology.

MANUAL OF DIFFERENTIAL MEDICAL DIAGNOSIS. By Condict W. Cutler, M. D., Physician to the New York Dispensary, Assistant Surgeon, New York Hospital, Out-Door Department; Late House Physician, Bellevue Hospital, etc. 12mo: one hundred and sixty-one pages. Cloth. New York: G. P. Putnam's Sons, 1886.

The plan of this little work is very simple. Opposite the name of each disease of a special part or organ of the body is placed the name of the diseases to be differentiated. The symptoms of these diseases are arranged in double columns in contrast. Such symptoms that are most liable to be confounded one with another are placed opposite. With this plan the author has been able to give a great amount of valuable material in a very limited space which aids the reader to readily arrive at a diagnosis. The work is carefully and accurately compiled. The general practitioner will find it convenient and reliable.

MEDICAL DIGEST.

THE ROLE OF ELECTRICITY IN TABES.

"Ziemssen, in his latest edition of his book on electricity in medicine, has, after an experience of thirty years, become a pessimist, contrary to the therapeutic optimism of the specialists. After this the high expectations from the healing powers of electricity will have to be toned down somewhat. This news will hardly affect the remunerative enthusiasm of some electricians, who will, as heretofore, cure tabes and other scleroses by drawing sparks two or more inches long from the astonished and credulous victims."

We may say, in reference to the above, that neither tabes nor any other grave affection of the central nervous system should be combated by electricity alone. It is not the machine or battery, but the medical judgment that directs the conjoint use of electricity and other remedial agencies, that may conquer these maladies; and the medical man who credits the machine alone with the cure, wrongs alike his profession and his patient.

But there remains no doubt in our mind, after long experience and adequate confirmation in the comparative treatment of certain nervous affections with medicine alone, and with conjoint medication and judicious electrization, that results were greatly in favor of the combined plan, especially in epilepsy, paralysis, neuralgia, and sclerosis in all of its forms. The appropriating power for the medicines administered is not only improved by judiciously-selected and prudently-administered electrizations, but favorable molecular changes have been undoubtedly established, from which absolute cures have followed in many of our cases where only such medicines had been used as had previously failed when given without the assistance of conjoint electrization. We have a record of results in our own experience in epilepsy, hemiplegia, and in one or two cases of paraplegia and tabes, sufficiently satisfactory to refute the skepticism of Ziemssen. Electricity, however, is not everything, and it is not the sparks of the static machine (with which we have had but little experience) that does the most good. In fact, two-inch sparks and the shocking effect are rather harmful in tabes than beneficial.

The roller, up and down the spine, especially in the dorso-lumbar area in tabes dorsalis, and to the legs, and the descending constant galvanic current to the head, in cerebral sclerosis, are decidedly beneficial. It is too late in the day of medical progress to ignore them, and it is extremely inconsistent to countenance manual or machinery massage to the extremities in tabes while discountenancing the molecular excitation of the static roller.—*Technics.*

THERAPEUTIC PROGRESS.

Hydrastis Canadensis (fluid extract) is an excellent local application in cervicitis, endometritis, and vaginitis.

Iodoform and Boric Acid, equal parts, combined and reduced to powder, make the safest and best antiseptic compound for all purposes.

Benzoate of Soda for Erysipelas.—Haberkorn, believing that the various antiseptics have not the same action, brings forward benzoate of soda as particularly efficacious for erysipelas, scarlatina, and other infectious diseases with cutaneous localization.

ETHER, twenty drops with ten drops of the tincture of cannabis Indica, is regarded by Professor Arnold, of Baltimore, highly beneficial in nervous headache.

VERATRIUM IN CHOLERA MORBUS.—In Germany and Italy where cholera morbus has been unusually prevalent for the past two summers veratrium has been found the most efficient remedy in the treatment of the disease.

ASAFŒTIDA IN THE TREATMENT OF HABITUAL ABORTION.—Having had his attention directed to the matter by the publication of Laferta, Cazzoni, and Giordano, Negri tried asafœtida in two cases of habitual abortion not attributed to syphilis or any other ascertainable cause; and successfully in both cases. Eighteen grains of the drug were given daily for a long period, and that amount was well borne.

ITCHING OF THE VULVA.—A contributor to the *Union Medicale* credits M. P. Meniere with the following formula:

Zinc oxide	6 parts.
Potassium bromide	10 parts.
Extract of Indian hemp	2 parts.
Glycerite of starch	30 parts.

The application should be preceeded by the use of lotions of very hot linden-flower water (distilled from the flowers of the tilia europœa). When there is acne in the vulva, black soft soap should be applied for half an hour at a time, morning and evening, followed by bathing with a strong infusion of black tea as hot as can be borne.

FLUID EXTRACTS MANUFACTURED IN VACUO.—Manufacturing chemists are vieing with each other in their endeavors to produce fluid extracts of an invariable strength. To accomplish this the most scrupulous care must be taken in the selection of properly collected and preserved drugs; and every detail of manufacture must be as closely watched. Various ingenious methods have been employed to produce the best possible results. Such a process must extract the principles of the drug without destroying their power. The full medicinal activity, odor, taste and color of the prime drug used must be preserved in the extract. Messrs. Farrand, Williams & Company, of Detroit, accomplish this by means of specially devised percolators, from which the air is almost entirely exhausted, facilitating the action of the menstrua, which is then forced into the apparatus. The cellular tissue of the drug being to a great degree exhausted of air, the contained active principles are to the best advantage acted upon by menstrua. The percolation is facilitated by powerful air pressure until the requisite amount of percolate is produced of a given standard strength. This process produces the extract without the aid of heat and *in vacuo*, and of an invariable standard. By these means, associated with the utmost care and skill, they manufacture a product that cannot be surpassed in "elegance of appearance, strength and purity."

COCA AS A CARDIAC TONIC.—Beverly Robinson, M. D., says: "On several occasions, when digitalis has proved to be useless or injurious, I have had very excellent results from caffeine or convallaria. Certainly the latter drug is more easily tolerated by a sensitive stomach than digitalis, and whenever the nervous supply of the heart is especially implicated, I believe that I secure more quieting effects from its employment. Among well-known cardiac tonics and stimulants, for obtaining temporary good effects at least, I know of no drug quite equal to coca. Given in the form of wine of fluid extract, it does much, at times, to restore the heart-muscle to its former tone. I have obtained the best effects from the use of Mariani's Wine. From personal information given me by this reliable pharmacist, these results are attributable to the excellent quality of the coca leaves and of the wine which he uses in its manufacture."

SPECIAL NOTICES.

PINUS CANADENSIS IN THE TREATMENT OF BURNS.—Dr. W. C. Wile, of Philadelphia, knowing the soothing influence of this preparation in acute inflammation of the vagina, made use of a solution of it in a case of severe burn, with the surprising result of relieving the pain instantly.

PAPINE.--Dr. Thomas Little writes that papine seems to meet a class of cases in which opiates are indicated, but in which the remedy is worse than the disease. "One case in particular," says he, "has given me a great deal of trouble for years. I tried opium in every form, and many other narcotics, alone and in combination; but constipation, nausea and nervous prostration have been invariable results. I then used papine, with the happiest effect; no nausea; no constipation; no prostration. I have been prescribing it in my practice since, with the greatest satisfaction to myself and my patients."

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ORIGINAL ARTICLES.

IS THE COLD BATH THE COMING REMEDY FOR TYPHOID FEVER?

BY HENRY F. LYSTER, M. D., DETROIT, MICHIGAN.
Professor of the Practice of Medicine, and Clinical Diseases of the Chest, in the Detroit College of Medicine.

We, whose eyes have seen in the last decade the almost complete banishment of septicæmia from civilized and enlightened communities, are prepared to expect a speedy resort to natural methods in the treatment of such diseases as do not require specific medicines for their control and elimination.

The treatment of typhoid fever has usually depended largely upon the general principles applicable to all forms of fever, and while claims for a specific medication have been advanced, such as the iodine, or the mercurial treatment, they have each in turn been abandoned, and a resort to a great variety and a limited amount of medication with the general tendency to the sustentation of the patient has been adopted.

After this fever has been defined, any attempt to break it up has generally been abandoned, and few believe that any can greatly control its course. Most of us try to steer the patient over the dangerous places and properly provision his frail craft for the thirty days' cruise.

In these days, when the physiology of disease is so generally recognized and its natural encyclic character known, we have abandoned the strong antagonisms of Rush and are contented if we can somewhat modify the character of the attack. Is not this the case with all of us in typhoid fever? Are we not satisfied when we feel that we have mitigated the severity of the attack?

The profession to-day are using largely a symptomatic treatment. The new remedies, antipyrin, antifebrin and pilocarpin, and the old remedy, quinine, are exhibited in almost every case, followed at a later period, in severe cases, by the comparatively moderate use of some of the alcoholic liquors, while many have entirely abandoned their use. The opinion that it is the long-continued heat that is dangerous; that the degenerations and tissue changes are those which this pathological condition determines, is the one accepted.

The use of the cold bath in fevers is not new. It is one of the natural methods which has come down with the race from remote ages. Why is it not now more universally adopted in the treatment of fever, is a more troublesome question to answer, than why we use it. We have all noticed that other very good methods of treatment have fallen into abeyance and disuse from no fault of their own, but merely from the changes of fashions of medical usage and custom. This is noticeably the case in water dressings in wounds.

The father of French surgery, Ambrose Parè, revived their use from having observed the healthy appearance of gunshot wounds in soldiers who had lain out in the rain for a couple of days or more between the lines, and who had in consequence escaped the cauterizing and hot pitch treatment of the day, supposed to have been necessary on account of the gun powder. Occasionally has some unconventional leader, like Parè or Sydenham, or John Hunter, or Stokes, stepped over the traces which held in harness the professional wheel-horses, and has astonished those who were driving along at the regular professional amble.

Sydenham, two hundred years ago, advocated the cold water douche in the comatose cases of malignant scarlatina: a treatment in those extremely severe and usually fatal attacks which would require all the fortitude and long years of slowly acquired confidence on the part of the family physician to institute to-day, and yet there are but few physicians who do not believe that it is the best plan to pursue for its revulsive effects when the temperature is high.

Dr. James Currie, F. R. S., of Liverpool, advocated the use of the cold bath in the last quarter of the last century, and published a delightfully written volume upon the "Effects of Water, Cold and Warm, as a Remedy in Fever and in other Diseases," Philadelphia, 1808 (from the fourth London edition). This volume is well worthy of perusal, and when I mention the fact that he was accustomed to use a clinical thermometer in the mouth and axilla indifferently, and a self-registering thermometer too, practitioners of to-day, who have not adopted it on account of its supposed recent introduction into medicine, will find that in this they are a century behind the times. He says: "I prefer John Hunter's thermometer of great sensibility and a movable scale." These were used about 1780 to 1790 by both Hunter and Jenner in experiments upon the temperature of animals.

James Currie had his attention particularly called to the cold baths in fever from the published reports of this treatment by Dr. William Wright, later president of the Royal College of Physicians and Surgeons, Edinburgh, who instituted this treatment September 9, 1777, upon himself on board ship sailing from Jamaica to Liverpool.

Dr. Wright, he says, admitted that he adopted the idea from one of the old Latin writers.

From a perusal of Dr. Currie's writings one is led to believe that the practice of the use of the cold douche and cold bath in the typhus or nervous fever, as it was then commonly called, became more or less general in hospitals and with the better class of physicians in the latter part of the eighteenth and earlier part of the nineteenth centuries, and was generally discontinued and supplanted by other treatment conforming to the newer theories and views of the profession.

Dr. Brand, of Stettin, Prussia, is entitled to the credit of having so established this treatment, and in his work* has enthusiastically insisted upon its value. Niemeyer also had used the cold bath and cold pack in his clinic at Tübingen. He says that "the hydro-therapeutic treatment of typhoid fever was first introduced and carefully observed in my clinic." It was here that Liebermeister and Immermann made careful observations on the abstraction of heat by this method. Niemeyer recommends the plan adopted by Ziemssen of using a moderately cool bath, about 10° Fahrenheit below the temperature of the patient, as shown by the thermometer. It needed the positivism of Brand, of Stettin, to acquire disciples, and according to Liebermeister, he it was who incited Bartels and Jürgensen at Kiel to adopt the cold water baths in the treatment of typhoid fever in the medical clinic.

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* "Die Wasserbehunglung der Typösen Fieber (abdominal und Flech typhus)" von Dr. Ernest Brand, in Stettin, 1861.

With some modifications the principles enunciated by Brand have been adopted throughout the German Empire, and with a phenomenal success in limiting the mortality of this fever which is as frequently met with in Europe certainly as it is in this country.

The mortality claimed by Dr. Brand is not more than three per cent. in cases where the cold baths have been early resorted to.

The last United States census, 1880, shows a mortality of at least twenty thousand per year reported in the United States, and, strangely enough to many persons, more deaths occur in the country than in the city in proportion to the number of inhabitants, with the exception of a limited district in Ohio, Indiana and Kentucky; and in the country the larger proportion of cases are from the districts that furnish the larger number of malarial diseases.

Dr. Brand recommends the use of the cold bath in nearly all cases of typhoid, beginning as early as possible, not waiting for the establishment of the fever and the positive accuracy of the diagnosis. He recommends a regular methodical use according to rule. The bath should be at 68° Fahrenheit, and the patient should be left in the bath fifteen minutes, the arms and legs being rubbed under the water by the nurse. The bath to be repeated every three hours with great regularity, day and night, if the thermometer shows a temperature of 102° Fahrenheit or over. If the temperature has not risen to that degree the bath is to be deferred until it does reach it, the thermometrical observations being taken every half hour or hour until it is time to give the bath. After the bath the patient is wrapped in a dry sheet in the bed and covered with a blanket or not, according to the sensations. If the heart is weak or the patient is quite feeble or elderly, a teaspoonful or two of wine should be given before the bath.

This plan is pursued day and night until the temperature remains permanently below 102° Fahrenheit. During this time the only food given is new milk, about two ounces every two hours. No medicines seem to be required when this treatment is pursued. The patient usually sleeps well between the baths, and in a short time relishes in a majority of instances the milk. The baths given in this manner are not agreeable to most persons, and it requires some pursuasion and some urging to carry out this treatment effectively and thoroughly, but there are many very disagreeable features in every other method which, in my opinion, more than counterbalance the disagreeableness of the cold water treatment.

It is held by Dr. Brand that if begun early and properly managed that it is not necessary that any case of typhoid fever need be severe, and that a fatal termination should be a rare exception to the rule. He holds that peritonitis or intestinal hæmorrhage are the only two conditions that would necessitate its abandonment in any case.

[TO BE CONTINUED].

STATICAL ELECTRO-THERAPEUTICS.

[CONTINUED FROM PAGE 306].

BY AMBROSE L. RANNEY, M. D., NEW YORK CITY.

We have now discussed at some length (1) the physics of this form of electricity; (2) the improvements made from time to time in machines designed to generate it; and (3) the various methods of application of this agent.

We are now prepared to consider more intelligently the various diseased conditions of the human body which static electricity has been shown either to ameliorate or arrest. In this connection I take the liberty of first quoting from an admirable paper of my friend, Dr. Morton, published some years ago upon this subject, a few paragraphs which relate to the rise and fall of static electricity as a therapeutical agent. He says:

"In 1730 Mr. Stephen Gray, of London, first insulated and electrified a human subject, and in 1734 the Abbé Nollet received the first spark drawn from a body thus insulated. From this incident undoubtedly sprung the modern idea of electro-therapeutical science, for Nollet pursued electrical investigations to great lengths, and as early as 1746 was treating paralytics by insulation, sparks, and shocks. About this time, also, Professor Kruger, of Helmstadt, and Kratzenstin, his pupil, cured paralysis by electricity, and Klyn cured by means of sparks a paralyzed arm. These cases were the first strivings of modern electro-therapeutics, but they produced little effect on medical practice.

"It was a publication in 1748 by Jallabert, professor at Geneva, that first drew the earnest attention of the medical world to the real curative power of electricity. Jallabert restored to perfect motion and sensation in two months a locksmith's arm which had been paralyzed during fifteen years. In the meanwhile the invention and perfecting of the electric machine and Leyden-jar paved the immediate way to the practical use of electricity as a remedial agent, and soon, following the success of Jallabert, the whole medical world was awake on the subject of medical electricity. At Montpelier, under the auspices of Sauvages, president of the Academy of Medicine, the people flocked in multitudes to have their ailments relieved, and so great was the number of successful treatments that the physicians were obliged to appeal to the priests to protect them from the charge of witchcraft. Deshais, in 1749, wrote a dissertation upon the Montpelier experiences. Quelmalz, Linnæus, and Zetzel followed him, and from this period onward up to the year 1800, works* on the subject multiplied in all countries.

"It is interesting to recall that Franklin, in 1752, treated paralytics at Philadelphia by statical electricity.

"It is evident, then, that statical electro-therapeutics was already, at the end of the last century entering upon a marked career of service to medicine when galvanism and the voltaic pile, in 1800, extinguished it at the very height of its progress. It is not improbable that its abandonment was a loss to medical science.

"Up to comparatively recent times frictional electricity for medical purposes was produced from a single glass wheel. Its *tension was low* and its *quantity small.* But the invention of Holtz, in 1865, marked out for modern statical electricity the possibilities of a new career. In the Holtz machine we have an apparatus simple and durable in construction and capable of furnishing electricity of high tension and in great quantity. And by means of the Leyden-jar condensers, and of the possibility of increasing the number of wheels, both tension and quantity are within the control of the operator. At a given length of spark or tension, every additional wheel adds only to the quantity, and Holtz machines, with as many as twenty revolving wheels, have been constructed, in which the quantity, of course was very great. This very fact of a greatly increased working quantity of statical electricity justifies the expectation that modern electro-statical therapeutics will take a step greatly in advance of its past.

"Statical electricity, as we have already seen, has never had fair play in modern medicine. The older practitioners (1740 to 1800) have left us glowing records of its value—records embodied in a period of literature still full of fruitful suggestion in other branches of medicine, though in none more advanced than in the

* Besides those mentioned, the most important are by De Haen, Watson, Franklin, Priestley, Gardane, Sigaud de la Fond, Bertholon, Cavallo, Wilkinson, and Manduyt; the latter is particularly valuable to the student of medical statical electricity.

treatment by electricity. The physicist of to-day cannot neglect the work of Franklin, of Symmer, of Du Faye, of Cavendish, and the long line of the men of their time who unrolled to view the mysteries of a new science. No more can the physician neglect, from a medical point of view, De Haen, Boze, Bertholon, Nollet, Wilkinson, Cavallo, Manduyt, and a dozen others. True, the mantle of their labors decked in a degree the new galvanism and the newer faradism, while in the act statical electricity dropped from sight. It found conscientious revivers in Sir William Gull, Golding Bird, and Wilks in 1850, and thereabouts, and it is gratifying to note in their writings the highest appreciation of its merits. When at last it fell from their hands again abandoned, it was only and simply because of the inconvenience of administering it. The machine of their day refused to work in the damp of London fogs, and it was necessary in the electrical room of Guy's Hospital to keep a large fire constantly burning to dry the air; and even to-day, in Paris, one may visit the rooms of a practitioner heated summer and winter.

"But these disadvantages have now been removed. Statical electricity was again revived, and with great success, by Professors Clemens in Germany and Scwanda in Austria. In France, its revival has already received a notable impetus emanating from the famous clinic at Salpêtrière, where the presiding care of Professor Charcot and the efficient labors of Dr. Vigouroux have each contributed to place statical electro-therapeutics on a scientific modern basis."

The remarks of Dr. Morton which I have quoted are peculiarly significant in this connection. During the years in which I have personally been engaged in experimenting with various modifications and improvements upon the original model of Holtz's induction machine which have suggested themselves from time to time to my mind, I have had ample opportunities to observe in the daily routine of my practical office work the effects of static electricity upon many patients afflicted with diversified diseases. In preparing this article I have carefully searched through the records of quite a large number of cases where it has been most successfully employed by me. I have been struck in many instances with the rapidity with which it effected an apparent cure; in other cases, with the permanency of its beneficial results; and in all, with the simplicity and ease of its application. To a lady, for example, it is a matter of no small moment that she is freed from the necessity of divesting herself of any garments worn, and that almost any part of the body can be treated without exposure or annoyance. To the busy practitioner also, to whom time is valuable, it is not unimportant that several patients can be treated simultaneously; and that no delays are caused by waiting for each one to remove and replace their clothing.

Again, the application of "static insulation" is far more agreeable than "general faradization" or "general galvanization;" and, in my experience, it is fully as efficient in many cases in its remedial action as either of the methods referred to. The inconvenience to the patient of having to disrobe almost completely, and the distaste which many naturally exhibit to having a wet electrode or the operator's wet hand rubbed over the skin for from ten to twenty minutes is entirely obviated. With a sufficiently large insulated platform several patients can, if desired, be given a static bath in the physician's consulting room in the same period of time as would be consumed in administering general faradization to one patient and be spared the annoyances mentioned.

I do not mean to infer that some cases do not require the use of farădaic or galvanic treatment; nor would I be construed as casting any reflection upon the therapeutical value of the methods which were first suggested and employed by Drs. Beard and Rockwell of New York. The question at issue is simply one of convenience to the patient and the physician; provided that the indications of the case justify the trial of the static bath as a substitute for "general faradization" or "general galvanization."

In the second place, I think it has been justly claimed for static electricity that some of its therapeutical effects are more certainly and rapidly obtained than by means of any other form of electrical application.

As examples of such effects, I prominently mention: (1) The *relief of contractured muscles;* (2) *the relief of certain forms of pain;* (3) the *production of muscular contruction and the restoration of muscular power after the "reaction of degeneration"* has shown itself; (4) the *improvement of muscular power and general sensibility in certain organic spinal diseases;* and (5) the *stimulation of the skin in certain trophic neuroses.*

Respecting this statement, I take the liberty of again quoting certain paragraphs from the writings of my friend, Dr. Morton. He says:

"We may now ask the special question, *Why, above and beyond other forms of electricity, does statical electricity cure?* I will offer two explanations, and these are (*a*) first, simple mechanical disturbances, followed by a local alteration of nutrition; and (*b*) secondly, reflex action from irritation of the peripheral distribution of nerves.

"With regard to the first, when the electric discharge in the form of a spark, takes place in a resisting medium like the various parts of the human body which are submitted to it, a very great mechanical disturbance in the tissue at the point of discharge must inevitably result. A piece of paper, for instance, held between the electrode and the skin is perforated by the spark. A parallel to the mechanical action referred to, though in a less localized and less powerful degree, is to be found in ordinary physical exercise or in massage. From this point of view, static electricity by the method of sparks has, in a special degree, owing to its high tension, great advantages. The spark strikes a sharp, incisive, and penetrating, though scarcely painful blow, and often repeated in a given region, creates by simple disturbance, a great alteration in the nutrition of the part. This, at least, is the only way in which I can account for the almost instantaneous relief and cure, after a few applications, of a large class of pains seated in deep and superficial fasciæ, and due to subacute and chronic rheumatism. Neither blisters, other violent counter-irritation, nor medicine will dissipate these pains, while, on the other hand, static electricity will subdue them at once.

"The contraction of muscles is also often due to the same mechanical effect of the spark, just as muscles of the thigh may be made to contract by a snap of the finger or sharp blow from a percussion hammer.

"With regard to the second explanation—that by reflex action following a peripheral irritation of the terminal sensory filaments and endings, a very intricate question is opened, which we can no more than glance at here.

"How can simple electrification by insulation and the drawing of sparks, it is asked, produce the decided effects that are claimed for it. Static electricity, it is said, owing to its high tension accumulates merely on the surface of the body, and does not penetrate into the deeper organs, while the spark is merely the briefest kind of current.

"Recent investigations on the irritative action of applications to the skin have thrown a new light upon this question, and show that, though previously unexplained, the effects of the great accumulation of electricity on the surface and the sharp blow of the spark were, in truth, effects based upon a true physiological principle, the principle named by Brown-Séquard, its recent expounder—"the phenomena of inhibition." A few drops of chloroform applied to the neck of a guinea-pig produced, on some occasions, an epileptic attack; on others the nerves and muscles became highly excitable to stimulation.

"But the most notable effect of irritating applications of chloroform, as well as other substances, was a general anæsthesia; reflex symptoms were inhibited and muscular excitability lost.

"An interesting element has entered into our physiological and therapeutical studies—that of the reflex phenomena of peripheral irritation. And we may at once place under this single heading a large number of facts long familiar.

"External irritant applications, in one form or another, have always formed an important element in medical treatment. And most of these applications have been used to relieve pain, or in some way modify the general sensibility, either in contiguous or remote parts.

"Familiar examples are blisters, sinapisms, cupping, the actual cautery, ammonia, the moxa, aqua and acupuncture, and in latter days the magnet, the tuning-fork, and hypodermic injections of water into the thoracic walls for the purpose of allaying the cough of phthisis. The latest novelty in this direction is the electric percutor of Baudet, consisting of a tuning-fork kept in vibration by electricity, and communicating to any desired nerve or part, by means of a slender rod, the mechanical vibrations originated in the fork.

"Charcot, after cautious experimentation, has given his adherence to the statement that metals (metallotherapy) do produce effects contiguous and remote when applied to the skin—that the magnet also produces similar effects, both upon general sensibility and muscular power. Vigouroux has pointed out that the vibrations of a tuning-fork, either alone or communicated to a sounding-board, provoke similar phenomena.

"Here, then, in this collection of well known facts, and in the broad generalization of Brown-Séquard, drawn from his recent experiments, we have at last, it seems to me, found the law which governs the results produced and to be expected from statical electrification, as well as from some other uses of electricity. This law is the effect produced upon remote parts by affecting the peripheral distribution of the sensory nerves, and the effect produced is most commonly relief of pain or spasm in a remote part, and in this principle of inhibition from peripheral application may doubtless be found the explanation of many of the definite and hitherto inexplicable effects of static electricity.

"The 'insulation' alone holds the entire sensory peripheral distribution of the skin in its grasp. Every nerve-filament is vibrating, is polarized, or affected, whatever term we choose to use, by the tense layer of electricity or electrical influence collected on the surface, there bound by the natural laws of physics, and only waiting to be drawn off by a spark or diffuse itself gradually into the atmosphere, while in the spark itself is found a still more potent and localized stimulating agent."

I have quoted the preceding paragraphs from the pen of Dr. Morton, because they coincide in the main with my own views; the possible exceptions being a few technical points in which I might not fully agree with that author.

From conversations held with him I am led to infer that his experiences and my own have been generally in accord respecting the therapeutical effects of each of the several methods of statical applications already described by me in preceding pages.

It is extremely difficult to formulate general deductions respecting any therapeutical agent. Such attempts necessarily tend to evoke criticism; because exceptions to every general statement may be brought forward as evidences of their unreliability. I am, however, inclined to offer the following general deductions respecting static electrical applications for the benefit of the reader; with the *proviso* that they may not apply to every case, and that they be not construed too literally:

First.—My experience has not confirmed the view (heretofore advanced by some authors) that the *positive pole* of a static machine has a "tonic" and the *negative pole* a "depressant" action.

I have found, after repeated experimentation, that either pole seems to answer equally well upon most patients. I commonly employ in my office the positive pole, however, because it happens to be the most conveniently connected with the patient.

Second.—As a curative agent, *I regard static electricity as of great value.*

While galvanism must always hold a pre-eminent place in electrical therapeutics, because of the chemical effects so obtained, there are certain diseased conditions in which static electricity is unquestionably superior to faradism and galvanism.

Third.—It has been shown in preceding pages that the *static induced current fulfills all the known indications of faradism.*

It has moreover two great advantages over the faradaic instrument, namely, that a constant polarity is obtained and a much greater electro-motive force. It is also less painful than the faradaic current.

Fourth.—Static electricity possesses a decided advantage in some cases where faradization or galvanization have either given negative results or have apparently lost their remedial power after their use has been too long continued.

It is a common expedient with medical electricians to shift from one form of current to another from time to time whenever the progress of the case seems unsatisfactory. Under such circumstances Franklinism forms another link to the chain; and greatly aids us when faradism and galvanism have both proven inefficient.

Fifth.—I have found *heavy static sparks to surpass any other form of electrical application for the relief of contractured muscles.*

The sparks are withdrawn from the part so affected in rapid succession for about five minutes.

Post-paralytic contracture, old deformities from preternaturally shortened muscles, and the various forms of obstinated and protracted tonic muscular spasm often yield like magic to the influence of heavy sparks.

Sixth.—It is well known that *certain forms of pain often disappear at once after static applications.*

The most marked type of pain so relieved is the so-called "*rheumatic muscular pain*" or that observed in genuine *muscular rheumatism.* I have seen many such cases where one application of heavy sparks to the seat of pain for a few minutes has caused permanent relief.

Again, *neuralgias* of a distressing kind are often dissipated after a few applications of heavy indirect static sparks for from five to ten minutes at a sitting.

Finally, I know of no other agent which exerts so marked an effect of a happy kind upon the "*lightening pain*" observed in locomotor ataxia, as does the heavy static sparks.

Seventh.—The application of the spark, both by the direct and indirect methods (Figures 13 and 14) *excites powerful muscular contractions.*

This effect is often desired in the treatmemt of *hemiplegia* and *other forms of motor paralysis.*

Some authors recommend the employment of "static shock" (Figure 16) for cases of paralysis of long standing; but, personally, I am inclined to regard this form of application as too severe for most patients.

I have often obtained a complete restoration of muscular power in special nerve-trunks by static sparks alone after the "reaction of degeneration" was fully developed and all faradaic excitability had ceased.

Eighth.—Cases which exhibit a marked *impairment of sensation* (whether of touch, pain, or temperature) are generally improved, in my experience, by the use of static sparks over the anæsthetic area more rapidly than by the faradaic or galvanic currents.

I have encountered several very striking cases which illustrate this point admirably, but a lack of space precludes the insertion of their histories.

Ninth.—Remarkable effects of static sparks upon that *form of baldness* known as the so-called "*ivory spots*" or *alopecia arieta* have been observed by myself through the courtesy of my friend Dr. F. B. Carpenter, of New York. I have seen several of his cases where he has wrought a wonderful change in the appearance of the scalp after several months of treatment of the bald spots by the "direct" spark. The growth of the hair, which had apparently been totally destroyed over the affected regions, is attributable probably to the rekindling of the circulatory and nutritive conditions of the affected area upon the scalp.

Tenth.—As a *general tonic* and also as a *stimulant to depressed nervous functions* "*static insulation*" (Figure 16) *seems to be particularly of service.*

I employ static electricity constantly by this method in *neurasthenia*, with marked benefit.

I have observed also remarkable improvement in *disturbed visceral functions* (such, for example, as dyspepsia, habitual constipation, diabetes, vertigo, asthma, etc.) after the use of static insulation for from ten to twenty minutes at a sitting.

Many such cases have expressed to me the greatest delight at the beneficial effects which such an application invariably produced. For the past three years, I have used my static machine almost exclusively as a means of *improving the "general nervous tone" of patients*, in preference to my faradaic or galvanic apparatus. It is much more satisfactory to patients because of its ease of application; and as far as I have observed, equally effective as a tonic.

Eleventh.—I am inclined to think that those authors who have written upon static electricity as a therapeutical agent in a lukewarm spirit, have probably been supplied with an apparatus which has been ineffective because it generated too slowly or imperfectly.

The *size and number of the revolving plates* and their thorough *protection from atmospheric changes* are factors of the greatest importance.

Many of the static machines sold to the profession are hardly more than mere toys. Any machine which gives a thin spark (even if a long one) lacks one essential factor to success as a therapeutical agent, namely, QUANTITY.

Twelfth.—I have used static insulation and sparks with satisfaction in the treatment of *chronic inflammatory and spasmodic diseases*; such, for example, as influenza, phthisis, bronchitis, asthma, laryngitis, neuritis, synovitis, etc.

Three cases of chronic synovitis of the knee-joint of an intractable form recovered completely under my care within a month under the daily administration of static sparks to the affected joint.

Many cases of bronchitis and asthma have been greatly benefitted by insulation and sparks to the chest.

I have used static insulation (followed by the withdrawal of sparks from the spine and abdomen) upon subjects afflicted with dyspepsia, flatulency, and constipation. In many instances this form of electrical treatment gave very marked relief.

The influence of this agent upon visceral derangement is, however, a field for future investigation. It gives promise of happy results. As yet, my personal experience is too limited to justify me in formulating any positive conclusions respecting the method which is best employed in individual cases.

Thirteenth.—Static electricity is of value in the treatment of *hysterical states* and *other allied conditions.*

Charcot has long been an advocate of this therapeutical agent in such cases. My own experience teaches me that it is of great service as an aid to recovery; although I believe that in a very large proportion of these subjects reflex irritation from "eye-strain" has to be combatted by the relief of anomalies in the eye or its muscles before a perfect restoration of health can be attained. I have discussed this field elsewhere (see *New York Medical Journal,* February, 1886, and April, 1887).

In closing, I would state that the length of this article (already too prolonged perhaps) precludes the insertion of the histories of many typical cases, which would be of great interest in this connection. To fairly illustrate the subject in its many ramifications a very large number of lengthy records would, however, be required.

Medical literature within the past ten years and antiquated works also fairly teem with cases reported by leading men in the profession here and abroad, which illustrate their concurrence and firm belief in the views expressed in preceding pages.

Static electricity is to-day, for the second time, generally recognized by the profession as a valuable therapeutical agent. Most of the leading neurologists have now a Holtz induction-machine as a part of their office equipment. The later editions of recognized works upon electricity as applied to medicine show almost without exception that this variety of electricity is deemed worthy of more attention than it received in the earlier editions. It has passed through its stage of neglect and distrust safely. It is steadily regaining the popularity it so justly achieved in the eighteenth century.

156 Madison Avenue, New York City.

CLINICAL LECTURES.

INTERSTITIAL PNEUMONIA.

BY SAMUEL A. McWILLIAMS, A. M., M. D., Chicago, Illinois.
Professor of Clinical Medicine, Diseases of the Chest, and Physical Diagnosis, in the College of Physicians and Surgeons, Chicago.

Reported for The Physician and Surgeon by Special Stenographer.

Gentlemen: Permit me to call your attention to this man who has presented himself for the first time for dispensary treatment. As we look at him we observe his peculiar sallow complexion. He is thin and much emaciated. He is flat-chested, hollow above and below the clavicles. His finger-nails are blue. His hands are cold, and circulation poor. We see on the right side of his neck, and behind the ears, some scars; there are also some little ones on the left shoulder blade. By the way, here is a round lump on the right anterior aspect of the chest three inches in diameter, four inches to its center below the nipple. Upon palpation it fluctuates. There is no redness, nor is there, according to the statements of the patient, any pain on pressure. Do you ask the question, "Can that be an abscess pointing from the liver or from the pleural cavity?" We think not, because there is no enlargement of the chest; no short nor difficult breathing; no flatness on percussion. As he breathes the intercostal spaces are not flat nor bulging, but hollow. They are the same on both sides. On inspiration they become depressed. There is no œdematous swelling round this lump or bulging beneath the ribs anywhere beyond its limits. I take it for granted that it is localized outside of the ribs beneath the skin. The skin does not feel unusually warm to touch; his respiration is not abnormally rapid. The apex heat of the heart is in its normal position. The heart sounds are normal; the radial pulse beats alike in both arteries; the feel of the artery is neither hard nor atheromatous. Inspiration is vesicular in quality; vocal fremitus being better felt on the right than on the left side. Percussion below the clavicles, in the center upon each side, gives hyper-resonance.

The young man of foreign birth and unfamiliar with our language is twenty-four years of age; unmarried; has been ailing three months, and is a cabinet-maker by trade. His cough is unusually severe at times, and is more annoying in the morning than at night; the color of the expectoration is greenish, and often amounts to a teaspoonful at a time. He has had no hæmorrhage; does not complain of anything besides his cough. He has had no diarrhœa that would cause him to emaciate, yet he has been growing thin. He does not know how many pounds he has lost, but says that his usual weight is one hundred and sixty-eight pounds. We are informed he was a powerful man previous to his sickness. He has no night sweats, but feels feverish at times. His temperature now is 100½°. We learn that his father died of consumption. If we question him with regard to his family history a little more closely we might be able to ascertain something of greater significance, but I hardly think it necessary, for we do not encounter much difficulty in diagnosing cases of this kind. We will base our diagnosis upon the brief history he has given us (by means of an interpreter), together with the light we have been able to glean from his physical condition. We suppose this man was born with a feeble constitution; that his tissue is made up of poor material; it is not strong and elastic enough to resist exposures of any kind. We know not if he has been given to dissipation; what his hardships and trials have been. His surroundings may not have been good. With what little information we have been able to gather I should consider this a well marked, typical case of *interstitial pneumonia*, and by that I mean simply an inflammation of the intercellular tissue by which a certain amount of cellular material forms new connective tissue, which contracts and lessens the calibre of the air cells, the bronchioles, the lymphatics, and, in fact, every structure present, and as it progresses it squeezes the blood-vessels so that the blood is not able to course its way through; it simply cuts off the blood supply from the lung tissue involved and eventually certain areas supplied by these blood-vessels will become dry, die, and undergo caseous degeneration. I suppose this man's pleuræ are adherent to the thoracic walls; certain portions of his lungs admit less air than normal, and others more, hence the physical signs are not well marked. His breathing at the present time is neither rapid nor labored.

The treatment would be to lessen the inflammatory condition that is going on and to improve his general health so as to prevent degeneration of the tissues and formation of abscesses, such as the one we see on his right side, and which, after using a hypodermic syringe and withdrawing the piston, we found to contain pus. We will give him quinine, three times a day, five grains, before each meal, and give it in the powder form, for the reason that the capsules in a great many cases are put up with glycerine which so hardens the quinine in the capsule that when taken it passes undissolved. We will give him also five drops of dilute sulphuric acid with his quinine, and ten drops of the tincture of chloride of iron after meals. If he complains of constipation, or headache, after the administration of the iron, we will discontinue it. Keep the bowels free. Give him cod liver oil, if it can be well retained by the stomach. He should endeavor to expand his lungs by taking frequent, slow inhalations of air. A change of climate might be beneficial for him, if he can find one suitable.

ORIGINAL TRANSLATIONS.

FRENCH LITERATURE.

TRANSLATED BY LEONARD F. HATCH, M. D., PLYMOUTH, MICHIGAN.

CONSIDERATIONS CONNECTED WITH FRACTURE OF SKULL BY *CONTRE COUP.*

A paper by Paul Berger and Mlle. A. Klumke, Paris, giving a minutely detailed account and discusson of a case of fracture of skull by *contre coup* closes with the following deductions:

(1) Fractures of the base of the skull are produced distant from the point of application of external violence. (2) Fractures thus produced take place by preference, through the orbital prominences, the lesser wings of the sphenoid, and the cribriform plate; and, they may involve the petrous portion of the temporal bone. (3) They seem to be produced from the construction assigned to fractures of the skull by *contre coup*, by

Perrin. (4) Intercranial hæmorrhage between the dura mater and the skull, caused by rupture of the middle meningeal artery on the plane of a fracture, can occupy the bottom of the middle cranial fossa, and produce no sign of central compression, even when they are of considerable size. (5) A point of hæmorrhage may be seen in the cerebral substance, following an injury produced by *contre coup* at a point opposite to the point of application of violence, and not be able to cause the displacement of the cerebro-spinal fluid as the cause of its production. (6) In recent and extensive injury, clearly defined aphasia may exist without any appreciable lesion, of the convolution of Broca, of the inferior portion of this convolution, or of the convolutions of the island of Reil. (7) It is then not possible in case of recent injury affecting the skull, to rely wholly or principally upon this symptom, to determine the desirability of trephining, or to determine the point for the application of the instrument. —*Revue de Chirurgie.*

INJECTION OF WARM WATER IN DYSENTERY.

Dr. R. Tripier advocates the injection of hot water in dysentery. He says, hot water, (105° to 115°) if retained a sufficient length of time immediately relieves the pain; the blood disappears from the stools, and these soon become less frequent. The quantity of water used should be just as large as can be retained; ten to twelve ounces for a child and a quart or more for an adult.—*Lyon Medicale.*

ARSENATED LITHIA WATER IN DIABETES.

Dr. Martineau, Physician to the Hospital of Louvaine, uses the arsenated lithia water in the treatment of diabetes, and claims to have cured sixty-seven cases out of seventy by its use. The water is prepared as follows: To every four grains of the carbonate of lithium, add a half ounce of the following solution: Arsenite of soda, four grains; distilled water, one pint. A tablespoonful (one-half ounce) of the mixture will then contain four grains of the carbonate of lithium, and one-eighth grain of arsenite of sodium. This quantity should be taken in divided doses in twenty-four hours; which should be taken in wine during meals. The treatment should be kept up two or three years after every trace of sugar has disappeared in the urine. Dr. Martineau does not advise much change in the diet; he merely restricts the amount of starchy foods. The treatment gave the best results with patients having arthritic symptoms. There were no arthritic symptoms in the three cases where it failed.—*L'Union Medicale du Canada.*

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.

REPORTED BY W. P. MUNN, CLINICAL CLERK.

ULCER OF LEG.

John A., aged twenty-seven, carpenter. Admitted to hospital October 1, 1885.

History.—During last winter he contracted an itch which covered the whole surface of his body. Heavy woolen drawers which he had worn, chafed the sores on the external side of his left leg, and caused an inflammation of the part which became a large running sore in the spring. He has applied many domestic remedies, as slippery elm and flaxseed poultices with no benefit. At one time he used white lead but it did no good. During all this time he was on his feet and worked at his trade.

Present Condition.—Several large ulcers on left leg; they are weak and unhealthy in appearance; the discharge scant and thin; edges indurated; the limb swells during the day, but becomes reduced at night. General health good. His right knee is stiff, the result of a cut made with an adze, in May, 1884. After receiving the wound he continued to work; inflammation of the joint followed. The knee was poulticed until it discharged and finally healed. In a short time the inflammation and suppuration returned and a large amount of pus evacuated.

Clinic.—Examined before the class.

October 8: Clinic.—Abstract of remarks. The ulcer is more healthy looking than a week ago. He has been using a dressing of calomel and lard. The calomel was ordered but the lard was not; the latter is objectionable; this can be said of any fatty dressing to sores of this character. When any ointment is used it is almost impossible to keep the parts clean; it accumulates and pus and blood become mixed with it, a condition not condusive to healthy granulation. Non-professional people have great faith in ointments and salves for this class of cases, and in your practice you will meet with the most filthy and repulsive materials used as dressings to these "running sores." They are worse than useless, they are injurious, to say nothing of their offensiveness. The essentials of treatment are simply rest and cleanliness.

Treatment.—Cold water dressing and rest.

October 19: Patient keeps his bed; ulcer granulating rapidly; skin grafts made to-day.

October 28: Skin grafts adhered and the largest ulcer is nearly covered with new skin.

November 2: Ulcers are healed. Discharged.

November 9: Returned to hospital with his ulcers broken out; caused by much walking without a bandage. Rubber bandage and water dressing applied.

November 28: Ulcers nearly healed.

December 7: Sores healed. Discharged.

EXTERNAL HÆMORRHOIDS: CAUSE OF GREAT PAIN AND CONSTIPATION; REMOVAL; CURE.

Mrs. K., aged forty-eight. Admitted November 9, 1885.

History.—Eight years ago she was troubled with hæmorrhoids, and was treated at that time by an injection into the tumors. She had no trouble since then, until one year ago, when she began to have pain and great itching around the anus. Four months ago her bowels became constipated. Occasionally she passes small quantities of blood.

Clinic: Examination reveals two small, hard hæmorrhoids at the margin of the anus. They are very sensitive. No other abnormal condition observed. Patient given chloroform and the little tumors removed by means of scissors. The growths were very hard and fibrous in nature.

November 12: No pain but that resulting from the operation since it was performed.

November 16: Constipation greatly relieved. Discharged.

CONTRACTION OF SPHINCTER ANI.

L. L. M., aged thirty-two. Admitted to surgical clinic November 16, 1885.

History.—Has been troubled with a chronic diarrhœa, being treated in medical clinic. For two years he has had pain in the rectum, and contraction of the sphincter muscles; the discharges are small and ribbon-shaped. There is great pain when bowels are moved.

Operation.—Sudden dilatation with the fingers, so as to rupture the fibres of the muscles. No anæsthetics.

November 19: Pain has been much less, and continues to diminish since the operation; diarrhœa is less severe, and feces are of nearly normal size.

NÆVUS ON CHEST: REMOVED BY INCISION.

Bessie B., aged six months. Admitted January 18, 1886.

Present Condition.—On her left side, over the tenth and eleventh ribs about two inches from median line, is a deep red tumor, about an inch in diameter. Its growth has been rapid.

Clinic: Under an anæsthetic (chloroform) the growth was removed by an oval incision two and a half inches long. The knife was carefully kept well away from the nævoid structure. Hæmorrhage slight. Wound closed with silk and horse-hair sutures.

January 21: Sutures cut out and wound gaped. Left to heal by second intention.

February 1: Wound healed. Discharged.

INGUINAL HERNIA.

Henry B., aged twenty-seven. Admitted to Hospital February 22, 1886.

Present Condition.—A right, indirect inguinal hernia was caused last September by overlifting. It is reducible, but causes him some inconvenience and pain. He wears a truss which is ill-fitting and painful, and in order to hold the hernia, must be worn very tight.

February 23: Dr. Sullivan adjusted an Egan Imperial Truss of three pounds pressure, which retains the hernia easily and comfortably. Discharged.

ABSCESS OF BREAST.

Mrs. Mary W., aged thirty-two. Admitted April 13.

History.—Mother of six children, the youngest six months old. Over one year ago she bruised her left breast, and in a short time she noticed a small bunch in the breast at the site of the former injury. The lump enlarged gradually. It was lanced one year ago, and a large quantity of pus evacuated. It has continued to discharge since that time. There is a small swelling in the breast at its inner and inferior portion. The discharge is scant. No enlargement of the gland.

April 14: Clinic.—Diagnosis: Abscess of the breast. A free incision was made through the sinus into the swelling; a small quantity of pus was liberated.

April 21: Wound nearly healed; discharge ceased; no pain.

April 26: Wound healed. Dismissed.

GENERAL CORRESPONDENCE.

A FURTHER CONSIDERATION OF PERINEAL INJURIES AND THEIR RESTORATION.

Dear Dr. Hendricks: Absence from town prevented my acknowledgment of your courteous note calling attention to Dr. Baldy's article in reply to my criticisms of his paper in my communication upon the "Laceration of the Perineum," published in the May number of your journal. At the outset, let me correct any misapprehension that I would be hypercritical or personal. I selected the subject as presented by Dr. Baldy as a fair exposition of the views held not only by the writer, but by Dr. Emmett and others. I am certain that few subjects are so imperfectly understood by obstetricians and gynæcologists as the anatomy and function of the perineum, and any intelligent discussion calling the attention of the profession to so important a subject should be gladly welcomed.

For a century, the component parts of the male pelvic floor have been studied, analyzed, and emphasized, until the medical candidate for graduation must be able to show expert knowledge therein. This is all very proper, but the female pelvic floor, both anatomically and physiologically, is relatively of a much greater importance and is subject to more frequent pathological conditions, and on this account should be of much greater interest to the general and special practitioner. Therefore the importance of a thorough fundamental knowledge of the anatomy and function of the parts involved. Careful analytical study on my own part, long since convinced me that much of the teaching, in the text-books upon obstetrics and gyæcology, was incorrect, and I have tried to present clearly and forcibly my deductions, not as theories, but as facts based upon anatomical research. I can but regard the differentiation of muscular bundles under separate names, although very convenient, as often misleading. The transversalis perinei, under discussion by Dr. Baldy, as something absent, is to be, broadly considered, as a part of the levator ani encompassing the rectum and by which the latter is held in its forward curve to its outlet. We never think otherwise of it in the male. Into this are blended, in the female, the other muscular groupings, in such a way, that the vulvar orifice is normally closed laterally and thus held at right-angles to the antero-posterior folding of the vaginal canal. That the insertions of the transverse part of the levater may occasionally differ, I cannot doubt, but, that in the true anatomical, or physiological sense, they are ever wanting, I do not believe. At least, I have never failed to find them, and should consider their absence as a distinctive "misbuilding." If I have done Dr. Baldy an injustice in over-emphasizing his views of the importance of the pelvic fascia, I take pleasure in the acknowledgment. In a certain sense, muscle and facia are equally important, since the one fails in its function without the support of the other. Both intact, or restored, and the parts are enabled to perform their functions with a comfort otherwise impossible.

In the criticism of my method of repair, Dr. Baldy is necessarily at a disadvantage. I have often operated as he describes, and the method advocated as my own grew little by little from my dissatisfaction with the more common manner of suturing. Dr. Baldy certainly does not appear to have ever seen, or attempted my method, and judges its merits only from description. He says, "there is nothing new in it except the introduction of the suture and pins."

The dissection is entirely unlike that of any other operator, except Dr. Jenks, and his flap is intended to be superficial and for the purpose of protecting the wound from vaginal secretions. My dissection is to separate the vaginal muscle from its pathological relations and is continued so as to reach the lateral sulci and, in its closure, not only is intended to, but does overcome the patulous condition of the introitus vagina in cases of great relaxation. The deep buried animal sutures are introduced to close the lateral sulci, and are continued upon each side so as to bring together the retracted ends of the transversali, which can be done in no other manner of suturing.

We are not without hope that this buried suturing, together with a superficial closing of the upturned external wound, may be all sufficient, without pins, or other method of retention. If so it is of great gain, since it requires no further care whatever. My colleague, Dr. E. W. Cushing, and myself have entrusted a number of hospital cases to this method alone, with good results. The pins are usually, after a little familiarity in their use, easy of introduction. They do include a large amount of tissue purposely, but, when properly applied, cause much less pain and suffering than the wire suture. This is because they simply hold, without compression, the enclosed parts like a well-adapted splint, giving fixation, retention, and rest, to the tissues; primal elements in repair.

In complete laceration of the sphincter ani, after the refreshing of the edges of the rent has been carefully made, a lateral dissection on either side enables the use of the buried suture. This must be applied after the closure of the rectal and vaginal sides of the triangle. These are approximated with the continuous animal suture. The suture should be fine and the stitches taken very near to the edge of the wound and not drawn too tightly, otherwise the suture will cause the edges to intra-fold, or overlap.

Opiates and stimulants, as well as a marked constraint in motion, are not advised. The urine is drawn only until I am sure of the protection of a plastic effusion; the bowels are not confined, but a daily dejection secured after twenty-four hours. The operation being done and retained aseptic, leaves little to wish for in improvement, either in ease of doing, comfort of patient, or certainty of a good result.

We commend it to Dr. Baldy for a fair trial, and any physician who may have the interest can almost any week avail himself of the opportunity of seeing the operation done, at either the public clinic or my private hospital.

Permit me, very respectfully,

HENRY O. MARCY.

116 BOYLSTON STREET, August 6, 1887.

PARIS LETTER.

MAREY'S CARDIOGRAPH MODIFIED.

In the *Gazette des Hopitaux* of the 19th of April, Dr. Albert Réné describes a modification which the author has applied to Marey's cardiograph forceps. This same modification has been applied by Marey to his ordinary myograph. In the myographs formerly employed, the lever was fixed on a metallic spring, of which the tension was varied by an eccentric rod. M. Marey, in his new myographs, has replaced this spring by a tension weight. By this means the traction exercised upon the muscle, etc., may be regulated at will.

In the cardiograph forceps, for the heart of a frog, the heart is held between two clamps; each of these is fixed on a jointed rod; one of these rods is rigid; the other, which bears the recording lever is movable; when the systole has separated the bits of the forceps, this movable lever is stretched by an india-rubber *string*, of which the tension may be varied at pleasure. This india-rubber string has many disadvantages. One of these, is irregular elasticity, and the form of tracings obtained varies considerably, according to the point at which the india-rubber has been fixed to the jointed rods. The same modification which has been adopted in the case of the ordinary myograph, may be applied here.

(1) A small hook is attached to the *movable* jointed rod; (2) to the *rigid* rod of the cardiograph, a small horizontal brass stem, perpendicular with this rod, and supporting a pulley, is attached. The string must be in the same place as the pulley; the pulley should have a diameter of ten to twelve millimetres, in order to multiply the points of contact between the string and the groove of the pulley, and consequently increase the sensibility of the apparatus. (The horizontal string at a tangent with the pulley, must not have more than a quadrant of contact with the pulley). A string is attached to the hook, which passes through the groove of the pulley, and supports a small tray, weighing one gramme; in this tray, weights of five, ten, fifteen and even twenty grammes may be placed, as in the ordinary myograph.

It would be advisable to allow six or eight centimetres length to the brass stem perpendicularly attached to the rigid rod; by this means the pulley will come outside the support of the cork plate, and the weighing tray will be freely suspended outside and below this plate, and will be easily accessible to the operator.

The object obtained by this modification is analogous to that obtained with Legros and Onimus' cardiograph, by placing the movable vertical stem of this cardiograph in contact with the recording lever of one of the new weighing myographs, instead of connecting this stem, by a string, to the lever of the old fashioned spring-myograph.

M. Réné proceeds to describe a modification which he has effected in Marey's lever drum. Great difficulty is met with in employing simultaneously, several lever drums, arranged in parallel order, on a horizontal support. Notwithstanding numerous precautions, it frequently happens that one of the levers ceases to inscribe a tracing on the cylinder. The movement of the cylinder is then stopped, and the recalcitrant lever slightly lowered. In touching the screw of this lever drum, however, the most skillful operator will sometimes disturb the adjoining two or three parallel levers. MM. Réné and Beaunis instructed M. Bellieni to apply the system of the regulating screw of the horizontal support usually employed, to several lever drums. By this means the operator may move, at will, a lever drum without touching the neighboring lever. This modification is easily effected. The lever drums are generally maintained on the horizontal support by a ring, which contains a thumb-screw. The drum is fixed to its horizontal support by tightening the thumb-screw. The ring usually forms part of the portion which contains the nut of the regulating screw of the drum.

In order to render the drum and its lever "rectifiable," without disturbing the ring, the two screws which connect the ring with the stem, are removed, and a spring is placed between them; one end of this spring is attached to the ring, the other is attached to the stem. To the stem which is thus rendered movable, a support is affixed, furnished with a recalling screw, of which the extremity terminates on a flat stem. By acting upon the recalling screw, the whole movable system, namely, the drum and inscribing lever may be raised or lowered at pleasure.

EXTENSION OF THE CLINIC TO DETROIT.

To Professor Donald Maclean, M. D., Detroit:

Dear Doctor—In regard to the proposed extension of the clinical department of the University to Detroit I desire to say that I have been glad to know that that question, which once had *life* in it, and that too quite prolonged, is not dead and allowed to sleep. It certainly needs a resurrection, and when the resurrection has passed upon it and its enlarged and perfected body shall be seen in a building worthy of it in Detroit, then will the medical department of the University enter upon a new life better and grander than its former life. I have longed to see that day!

I grant that the *sciences* of medicine and many of the studies germane to and helpful and enlarging to the medical profession can as well be taught in Ann Arbor as any where else in the world. But when you come to the question of turning out well *equipped* physicians and surgeons ready for useful and intelligent practice, it makes a vast deal of difference whether they have been well and *practically educated* in abundant opportunities for clinical observations of all kinds of medical and surgical diseases and injuries, or simply, though well and accurately, taught in the details of the science with few opportunities and little practical observation of disease.

A mechanic is not considered a full fledged one till after long service and use of the tools and material to which his trade is devoted.

I know the little hospital at Ann Arbor has done good service, and has helped to make better equipped physicians and surgeons than could have been made without it. But put that with the greatest credit and praise we can give it, and how far short does it fall of the opportunities afforded to medical students in New York, in its hospitals, its magnificent clinics and dispensaries.

Similiar, and possibly, in the near future, equal opportunities can be afforded in Detroit. If they are not seized upon and improved by the medical department of the University, then they must, and will be, by a rival and more successful medical school in Detroit.

I hope that before long we shall hear that the question which you now urge has been decided in the affirmative. Then we may anticipate an equal, or greater, success for the medical department of the University than is now shown by the College of Physicians and Sugeons of New York City. Then will men be found who will vie with the Vanderbilts to do as they have done in New York for the College of Physicians and Surgeons.

I remain, yours truly,

H. O. HITCHCOCK.

KALAMAZOO, MICHIGAN, August 5, 1887.

To Professor Donald Maclean, M. D.:

DEAR SIR—I have watched with the deepest interest the discussion on the question of the extension of the clinical department of the University to Detroit. I endorse every word that has been said in favor of the proposition and earnestly hope in the interests of medical science, of our beloved profession, and of suffering humanity, that this noble plan will be fully realized. If it succeeds, as I have no doubt that it will in due time, allow me to submit for the approval of the friends of the medical department of the University a few suggestions, the result of long years of reflection on the subject of the elevation of the standard of medical education to such a height as medical science of our time and our modern civilization are imperatively demanding.

Many have been the objections to such a measure in consequence of the existence of rival institutions, as every one is well aware, but they will all disappear as soon as the clinic of of the medical department of the University will have been established in Detroit and the medical faculty of Detroit itself has become a part of the medical department of the University of Michigan. Then, without any danger, the standard of medical education can be raised, and, according to my humble opinion, it ought to be done at once.

The means would be:

(1) No admission to the medical department for anyone who has not acquired before hand a *literary degree.*

(2) *A four years' course,* the first two years preparatory, theoretical, and didactic, embracing botany, chemistry, anatomy, physiology, histology, microscopy, public hygiene, etc., to be spent in Ann Arbor. After having passed the *testamen physicum,* the student would be admitted to the study of the practice of medicine, surgery, obstetrics, etc., for two years more at the clinics of Detroit; after which, after having gone through a thorough examination, theoretical and practical, the degree of M. D. would be given the worthy ones by the faculty of the department of medicine and surgery of the University of Michigan.

(3) No medical college now existing or to be established hereafter in the state of Michigan should have the right to confer upon any one a diploma as M. D. The legislature ought to pass a law in this direction, and although, perhaps, in a free country like ours nobody can be forbidden by law to teach to others whatever he may know, or combine with others for this purpose, yet I certainly believe that the right and the privilege to confer the degree of M. D. and by it the right to practice in this state *should rest solely and alone with the medical faculty of the state University.* Persons with the title of M. D. coming from other states or countries, where no laws like ours exist, should, before being allowed to practice in this state, undergo an *examen rigorosum,* either before the medical faculty of the University or before a state board of examiners, as may be deemed best.

By adopting these or similar measures, the medical department of the University of Michigan would be raised at once to the first rank in the United States, and with the eminent, learned and practical teachers which it would then have at its command, together with the clinical resources of Detroit, its success could not fail to be complete in every respect, its pupils would be among the best educated in the country, able to do their full duty to humanity and to reflect the highest credit upon their *alma mater*. In a very short time the University of Michigan medical school would be sought for like the front medical schools of Europe and would be able successfully to compete with them.

Now I think that this prospect should induce every one who means well towards the University, towards medical science, towards the medical profession, and towards poor suffering humanity to use every effort to accomplish these noble ends, and I hope your eminent colleagues will remember the old Latin proverb: "*concordia res parvæ cresunt descordia maximæ dilabuntur.*"

Excusing myself for trespassing at such length on your patience, I remain, dear sir,

Most respectfully yours,

HERMAN KEIFER.

DETROIT, August 2, 1887.

HEALTH IN MICHIGAN DURING JULY.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of July, (four weeks ending July 30), 1887, as follows, the diseases being arranged in the order of greatest prevalence.

Diarrhœa, neuralgia, cholera morbus, rheumatism, intermittent fever, consumption of lungs, cholera infantum, bronchitis, dysentery, remittent fever, tonsilitis, inflammation of bowels, erysipelas, whooping-cough, measles, inflammation of kidney, influenza, typho-malarial fever, pneumonia, inflammation of brain, diphtheria, typhoid fever (enteric), puerperal fever, cerebro-spinal meningitis, scarlet fever, and membranous croup.

For the month of July, 1887, compared with the preceding month, the reports indicate that diarrhœa, cholera morbus, cholera infantum, and dysentery increased, and that rheumatism, influenza, neuralgia, bronchitis, pneumonia, and tonsilitis decreased in prevalence.

Compared with the preceding month the temperature in the month of July, 1887, was higher, the absolute humidity was more, the relative humidity was less, the day ozone was about the same, and the night ozone was less.

Compared with the average for the month of July in the nine years, 1879 to 1887, cholera morbus, cholera infantum, and diarrhœa were more prevalent, and intermittent fever, consumption of lungs, remittent fever, scarlet fever, and diphtheria were less prevalent, in July, 1887.

For the month of July, 1887, compared with the average of corresponding months, for the nine years, 1879 to 1887, the temperature was slightly higher, the absolute and the relative humidity were more, and the day and the night ozone were less.

Including reports by regular observers and others diphtheria was reported present in Michigan, in the month of July, 1887, at thirty-six places, scarlet fever at twenty-five places, measles at twenty-seven places, typhoid fever at sixteen places, typhus fever at one place.

Reports from all sources show diphtheria reported at three places less, scarlet fever at twenty-four places less, typhoid fever at four places more, measles at nine places less, small-pox at one place less, and typhus fever at the same number of places in the month of July, 1887, as in the preceding month.

Henry B. Baker, M. D., Secretary.

Lansing, August 4, 1887.

EDITORIAL PERISCOPE.

EXCURSION TO WASHINGTON.

We are pleased to state that The Physician and Surgeon has perfected arrangements with the Toledo and Ohio Central Railroad to run an excursion to Washington. By this arrangement greatly reduced rates have been secured to members of the profession, their families and friends, who contemplate attending the coming International Medical Congress, which will convene in that city on Monday, September 5. The route selected passes through the grand mountain and river scenery, the celebrated springs resorts, and the famous battle-fields of West and Old Virginia, and terminates by rail at the renowned sea-side resort of Old Point Comfort. From there the excursionists are taken by steamer up the Chesapeake Bay and Potomac River to Washington, thence returned by rail to Charlottesville on the Chesapeake and Ohio Railroad, which passes through a most historical portion of America. The rates offered by this excursion are one-third less than those secured by the Committee of the Congress over the most direct route. Excursionists are privileged to stop over at any resort east of Charleston, and, as the tickets are good for fifteen days, ample time is given to make side trips from Old Point Comfort and Washington. The excursion offers a grand opportunity to see Richmond and other points of equal interest, to visit the sea-shore, and to study the grand public buildings, libraries, and museums at Washington.

The special excursion train for physicians will leave East Toledo on September 1, at 5:35 P. M., from depot foot of Cherry street bridge; but the tickets are good on their regular train No. 2, leaving Toledo at 7 A. M., September 2 and 3.

Excursionists leaving Detroit as late as 2:45 P. M., on the Michigan Central railroad, can join this excursion at Toledo.

Tickets from Toledo, $15.50; from Detroit, $17.50, including steamboat ticket, which must be purchased at the starting-point. See advertisement on advertising page 12¾.

Those who desire to go with this excursion please communicate at once with the Publisher of THE PHYSICIAN AND SURGEON. Exchange tickets can be procured by mail.

A STATE HOSPITAL.

There is published in this number two letters from prominent physicians, on the question of establishing, in connection with the Medical Department of the University, a Clinical Department in the City of Detroit. The question is of such significance that those having an interest in the alleviation of human suffering should aid its accomplishment. The decision on this matter should not be based alone upon the opinions of a few who are more or less personally interested. Such opinions can not be unshaded by selfishness or prejudice. Naturally men suspect that personal aggrandizement is the motive that actuates new movements when they are instituted by those interested in the change. This charge has been made, but we feel unjustly, against those who have been most pronounced in favoring this proposed Clinical Department. We pray for the expression of the Medical Profession of the State, and at large, on the subject. It is worthy of the earnest consideration, and the expression of the honest opinions of all, who want to see created in this State a higher plan of medical education, and a more useful medical charity.

The matter of transferring a few students from Ann Arbor to

Detroit, to finish their medical instruction is of small moment when compared with the theme of establishing a large

CHARITY HOSPITAL AND FREE DISPENSARY.

No State or country is more generous than the grand State of Michigan, in providing for its unfortunate citizens, who are born imbecile, mute or blind, or who have suffered mental dethronement. But it has done comparatively nothing for the cure and relief of those who are stricken with physical injury and disease. True, there are established in connection with the medical schools of the University, two institutions known as State Hospitals. But there is not sufficient facilities in these to accommodate the afflicted poor of any one of the more densely populated counties of the State. Then they are not State charities, except in the free services of the Clinical Professors, for it is expected that they will yield the stewards a handsome surplus.

The State authorities listened to the appeals made by mental specialists, that the insane of the State could not be as successfully treated, or as economically cared for, in the County Houses as in the large State Asylums. The county is no longer permitted to cage up its insane. The law that sends them to the State institutions is just, wise and humane. Is it not as politic and as rational to have the physically sick as well cared for? If from no higher stand-point than that of financial economy better provisions should be made for the relief and cure of physical disability. It is better to cure a deformity and restore a useful citizen, than to support a charity and make a pauper. This appeal of economy we conceive to be the lowest that could be made to enlist mankind in the noble work of relieving human suffering.

Physical ails are much more amenable to treatment than disorders of the mind, yet the grandest results are accomplished in our hospitals for the insane, under the treatment of the eminent physicians having these institutions in charge; reasonable then to expect even greater benefits from the operations and treatment of a corps of experienced and learned specialists, in a large hospital for diseases of the body.

Individual benevolence is doing much towards alleviating human suffering, and it will do more, when the State assumes some of the responsibility. Let a State Hospital be established, admitting patients under restrictions similar to those legislated for the Insane Asylums, and the problem of Medical Clinical instructions will be solved. Under the control of the State, the Hospital will from force of circumstances become an adjunct to the Medical Department of the University.

CONDENSATIONS.

Yellow Fever has developed in the refuge station at Egmont Key, Florida.

Technics, after a somewhat long absence comes to our table enlarged and improved in all its particulars. It is now issued bi-weekly in the form of a three column newspaper.

Dr. Schweninger who was successful in reducing the obesity of Bismarck, is to try his hand on the Czar. He is to receive six thousand dollars if successful, and twenty five hundred and traveling expenses if unsuccessful.

Professor V. C. Vaughan will have charge of the School of Hygiene, and of the Laboratory of Practical Hygiene, to be organized in connection with the University of Michigan, and under the direction of the State Board of Health.

The Peoria Medical Monthly enters its seventh volume with a new dress, that is very pleasing. We congratulate Dr. McIlvaine on the great improvement made in the character and appearance of the *Monthly*, and wish it the success that his labors deserve.

From a Paris letter to the *New York Medical Journal* we learn that among the more remarkable theses recently presented at the closing of the medical season in that city, one presented by Miss Elizabeth C. Bradley, of New York, on "Iodism" was officially marked as "extremely satisfactory," that being the highest mark given.

Incubation of Typhoid.—During an epidemic of typhoid among the troops at Royat, France, it was observed by the medical officers, that very often from thirty to thirty-five days after a heavy fall of rain there was a recrudescence of the disease among the soldiers of the garrison. This, therefore, would be the period of incubation of the malady.

Milk and Phthisis.—In a paper read at a recent meeting of the Yorkshire Association of Medical Officers of Health, by Dr. Mason, he expressed the opinion that milk which had been obtained from cows affected with tuberculosis would convey consumption if supplied to human beings. The President thought it very important that tuberculosis should be included in the list of contagious diseases, as consumption, which in his opinion was preventable, destroyed more people in a year than all other contagious diseases put together.

ANNALS OF SURGERY for August contains the following original memoirs: Notes on Plastic Surgery, by C. B. Keelley, F. R. C. S.; Ligation of the External Carotid Artery, by J. A. Wyeth, M. D.; Ligation of the External Carotid, by J. D. Bryant, M. D.; Report of Operation for Removal of Colossal Cystic Tumor of Lower Jaw, by W. B. Rogers, M. D.

REPRESSION OF QUACKERY IN GERMANY.—On July 4 the revival of the ancient laws against quackery was discussed in the fifteenth assembly of German physicians, held at Dresden. Here the majority was of the opinion that no law could put down quackery. Of the one hundred and five delegates, representing eight thousand two hundred and seventeen physicians, sixty-four voted against the revival of the law, and fifty-five for it.

TREPHINING FOR EPILEPSY.—A successful case of trephining for epilepsy is reported by Dr. Shufeldt, in the *New York Medical Journal,* August 6. The patient was a man forty years of age, who, when a child eight or nine years of age, was struck on the head with an axe. After the lapse of more than two months there has been no return of the fits, and the patient states that his health and faculties are in far better condition than for a number of years.

ABSORPTION OF OIL BY THE SKIN.—In answer to one who wishes to gain in fat and strength, Mr. I. C. Hoffman writes in the *Scientific American* as follows: "Let him take a warm bath, thoroughly 'opening' his skin, then rub dry with a warm, rough towel in a heated room, and when actually dry, let him rub in thoroughly, any pure oil, cod-liver preferable, but olive will do —all over his body. He will find that thus ten times more will be assimilated than his weak stomach can possibly digest.

INSUFFLATION OF QUININE INTO THE NOSE IN WHOOPING-COUGH.—Writing on this subject, M. Bachen states that the method is based upon the hypothesis that the cause of the fits of coughing is in the nasal mucous membrane. M. Bachen has obtained excellent results in all cases where he has adopted this treatment. The following was the plan of treatment employed. A mixture was made of one hundred parts of hydrochlorate of quinine, and five parts of powdered benzoin; two grammes (thirty grains) of this mixture were blown into the nose every twenty-four hours.

QUININE AMBLYOPIA.—Two cases in which temporary amblyopia had followed the internal administration of quinine, were reported by Mr. Nettleship at a meeting of the Ophthalmological Society of London. One of the patients had an idiosyncrasy to the drug, which even when administered in small doses caused gastric disturbance, and on two occasions previously had brought on temporary failure of vision. The second case he called a good classical instance of quinine amblyopia.

ANTIPYRINE IN BILIOUS HEADACHE.—Dr. Ogilvy, England, has found this remedy wonderfully potent, not only in cutting short the attack but in sensibly lessening the frequency of recurrence. He gives in capsule or simply dissolved in water eight grains of antipyrine on the first recognition of the attack, the patient lying down in a quiet and darkened room. After an hour the dose is repeated, and in some cases a third or fourth is required. No unpleasant after-effects of any kind are felt; the appetite at once returns and the sufferer is well.

MEDICAL CLASSICS.—This title is taken to name a new medical monthly published in New York. Its first issue, June, consisted of one hundred thousand copies, of which one was sent to every physician in the United States and Canada. We trust our readers did not condemn the copies they received to the waste basket. We concur in the belief of its editor, "that the study of the writings of the fathers of our art will not only be interesting, but that we will all profit thereby." We gladly give it a place on our exchange list.

SUNSTROKE AND ITS PREVENTION.—The large number of cases of sunstroke reported in the daily press, calls for some hints on this subject. Sunstroke is caused by at least two principal and distinct conditions acting together to produce the one common result. The exciting cause is external heat, which may not be due to direct sun rays; the other is an excess of blood impurities, with a dificient supply of nutrition in the tissues. Such being the causes, the prevention must include improved modes of life, as well as protection from the external heat. Alcoholic stimulants must be abjured; while tea and coffee, which check the formation of waste products are valuable. All conditions that tend to impede aeration of blood aid in producing sunstroke. The back of the neck must be protected as well as the head. A damp cloth or green succulent leaves have been found useful.

ASPHYXIA IN NEWLY-BORN CHILDREN.—Dr. Jennings, in the *Lancet*, July 23, again calls the attention of the profession to the fact that asphyxia in newly-born children is due to drawing the epiglottis down like a valve over the orifice of the larynx, during the first inspiratory efforts, so that air cannot obtain access to the lungs. As the result of this observation it is clear that the form of asphyxia under consideration can be prevented by drawing the epiglottis forward with a pair of forceps. For this purpose Dr. Jennings has designed a forceps that facilitates this manœuvre.

REMOVAL OF A TUMOR FROM THE SPINAL CORD.—Mr. Victor Horsley, of London, who has been remarkably successful in locating and removing inter-cranial tumors, performed the unprecedented operation of cutting through the vertebra, opening the dura mater, and removing a tumor from the spinal cord, measuring an inch and a quarter in length, and half an inch broad. The operation was followed by no untoward symptom, and at the time the case was reported the patient had already shown some signs of alleviation. The prominent symptoms in the case had been violent spasms, pain and complete paraplegia.

ADMINISTRATION OF OPIUM.—"There are few drugs more commonly prescribed than opium, and it is certain there is none more abused or more carelessly combined." This sentence by Dr. Auld, in the *Lancet*, is all truth. Not one of the numerous officinal preparations, in its individual actions, is free from the disagreeable after-effects which characterize that of the crude drug. The physician is constantly painfully reminded of this, and he makes all sorts of combinations to obviate the resulting headache, sickness, and loss of appetite caused by arrestment of the secretions of the alimentary canal. The much used atropia fails, its effects are of much shorter duration than those of opium, and while their cerebral actions are antagonistic, their actions on the alimentary secretions are much the same. Dr. Auld recommends giving opium and ether in combination, and claims good results; ether being one of the most powerful secretion stimulants we know. He gives equal quantities of tincture of opium and spirit of ether; although not claiming for this a specific effect, he thinks it a good and useful mixture.

THE WESTERN PENNSYLVANIA MEDICAL COLLEGE.—The announcement of this new medical school for the term of 1887 and 1888, shows that it is starting on a basis that has not yet been attained by a large proportion of our old established medical colleges. It requires an entrance examination of such applicants who cannot show certificates or diplomas as evidence that they have pursued a course of study fitting them for professional work. It has also added botany, hygiene and legal medicine to its required courses of lectures. The faculty are to be commended for taking this advanced position in medical education.

ANTISEPTIC TABLETS.—Since corrosive sublimate has come into such general use as an antiseptic in surgery and obstetrics, the general practitioner has found it inconvenient and troublesome to prepare his solutions and to keep them from depositing a precipitate and becoming inert. Through the suggestion of Dr. A. C. Bernays, of Saint Louis, Messrs. Parke, Davis & Company have prepared tablets, by triturating the bichloride of mercury with citric acid, which was found by Dr. Stutz, of the University of Jena, would prevent the reduction of the mercury salt by the salts of lime usually contained in the water, and that the solution would keep an indefinite period. With these tablets an antiseptic solution can be very quickly and accurately prepared.

PHARYNGEAL CATARRH AND PEPSIN.—A cure of a case of chronic pharyngeal catarrh by the use of pepsin is reported by Dr. J. Fisher, of Berlin, in the *Berlin Klinische Wochenschrift.* Various local and internal remedies were tried in vain, until finally, the patient complaining of some transient gastric disturbance, caused by too luxurious a meal, he was advised to take five grains of Jensen's pepsin, after each meal. The patient, who from the frequent medication had become adverse to medicine, took the pepsin pure, half a grain of aromatic powder being added to preserve the pepsin in a dry state. The effect was remarkable. Not only the stomach improved, but after three days the pharyngeal catarrh also showed decided amelioration. Larger doses, ten grains each, were thus administered, and two weeks later the catarrh had disappeared. The same remedy was afterwards used in four more cases with the same results, but other pepsin preparations failed.

NEW PUBLICATIONS.

QUIZ-COMPEND. NUMBER XI. A COMPEND OF PHARMACY. By F. E. Stewart, M. D., Ph. G., Quiz-Master in Chemistry and Theoretical Pharmacy in the Philadelphia College of Pharmacy (Alumni Quiz); Lecturer on, and Demonstrator of, Pharmacology in the Medico-Chirurgical College, of Philadelphia; Demonstrator of Pharmacy in the Woman's Medical College of Pennsylvania; Member of the American Pharmaceutical Association, etc., etc. Based upon Professor Joseph P. Remington's "Text-Book of Pharmacy." Cloth, $1.00. Interleaved for taking notes, $1 25. Philadelphia: P. Blakiston, Son & Company.

The work upon which this "Compend" is based is widely used as a text-book in schools of medicine and pharmacy; and the authors of both works are well known as eminent pharmacists and teachers. The "Compend" was written more especially in the interest of the pharmacy student, but the medical student must have a knowledge of pharmacy to prescribe drugs. To this end this small book will be of great service to him. It contains the well known facts in the science of pharmacy in a compact form easy to comprehend and easy to memorize.

QUIZ-COMPEND. NUMBER IX. A COMPEND OF SURGERY. FOR STUDENTS AND PHYSICIANS. By Orville Horwitz, B. S., M. D., Demonstrator of Anatomy in Jefferson Medical College; Chief of the Out-Door Department of Jefferson Medical College Hospital, and Late Resident Surgeon to the Pennsylvania Hospital, Philadelphia. Third edition thoroughly revised, enlarged and improved. With ninety-one illustrations. Cloth, $1.00. Interleaved for taking notes, $1.25. Philadelphia: P. Blakiston, Son & Company, 1887.

To supply the demand for this little work a third edition has been issued. The author has taken advantage of this opportunity to keep pace with the progress made in surgery and has added much new matter and many subjects have been entirely re written. The illustrations are taken, by permission, from the standard works on surgery. It contains all the essential facts that need be memorized by the student on fractures, wounds, dislocations, sprains, amputations and other operations, inflammation, suppuration, ulcer, syphilis, tumors, shock, etc., affections of the spine, ear, eye, bladder, testicles, anus, and other surgical diseases. The student will find this condensed matter a great benefit in fixing in his mind the salient points of surgery, and the practitioner will find it a ready and reliable reference in emergencies.

EPITOME OF DISEASES OF THE SKIN. Being an abstract of a course of lectures delivered in the University of Pennsylvania during the session of 1883 and 1884. By Louis A. Duhring, M. D., Professor of Skin Diseases. Reported by Henry Wile, M. D., Clinical Assistant in the Department of Skin Diseases in the University Hospital. Cloth, sixty cents. Philadelphia: J. B. Lippincott Company, 1886.

These lectures were given before the graduating class of the University of Pennsylvania. They are concise and practical in form, and with the object of making them an aid to students and others desiring a succinct account of these diseases, the author has revised and published them in the form of a small work. Professor Duhring's larger works on Diseases of the Skin are sufficiently well and favorably known to the profession, and this smaller one will not need further description to commend it.

BOOKS AND PAMPHLETS RECENTLY ISSUED.

"Granular Conjunctivitis with and without Pannus." By W. Cheatham, M. D. Reprinted from the *Atlanta Medical and Surgical Journal.*

"Pelvic Inflammations; or Cellulitis *versus* Peritonitis." By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital, New York. Reprinted from Volume XI, "Gynæcological Transactions, 1886."

"Medicine and Medicine Men." Anniversary address delivered at the banquet of the Louisville Medical Society, May 26, 1887. By John Godfrey, Surgeon M. H. S. Louisville: John P. Morton & Company, 1887.

"The Practitioner's Hand-book of Treatment; or, The Principles of Therapeutics." By J. Milner Fothergill, M. D., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park; Late Assistant Physician to the West London Hospital; Honorary M. D., Rush College, Chicago, Illinois;

Foreign Associate Fellow of the College of Physicians of Philadelphia. Third American from the Third English edition. Octavo: six hundred and sixty-one pages. Cloth, $3.75; leather, $4.75. Philadelphia: Lea Brothers & Company, 1887.

"On the Treatment of Diphtheria and Dyspepsia by 'Papoid.'" Being a resume of our present knowledge of the drug. Compiled from the published writings of the most eminent English and United States authorities upon the subject.

"Mental Epilepsy." By L. W. Baker, M. D., Superintendent Family Home for Nervous Diseases, Baldwinville, Massachusetts. Read before the Medico-Legal Society December 8, 1886. Reprinted from the *Medico-Legal Journal*, December, 1886.

"Persistent Pain After Abdominal Section." By James B. Hunter, M. D., Surgeon to the Woman's Hospital, New York; Professor of Gynæcology in the New York Polyclinic, etc. Reprinted from Volume XI, "Gynæcological Transactions, 1886."

"American Public Health Association Lomb Prize Essay, Healthy Homes and Foods for the Working Classes." By Victor C. Vaughan, M. D., Ph. D., Professor in University of Michigan. Concord, New Hampshire: Republican Press Association, 1886.

"Sphygmography and Cardiography, Phsiological and Clinical." By Alonzo T. Keyt, M. D. Edited by Asa B. Isham, M. D., and M. H. Keyt, M. D. 8mo.; two hundred and twenty-nine pages. Cloth. New York and London: G. P. Putnam's Sons, 1887.

"Recent Advances in Abdominal Surgery. The Annual Address Delivered before the Boston Gynæcological Society, January 13, 1887." By the President, Henry O. Marcy, A. M., M. D., Boston. Reprinted from the *Medical Register* of Philadelphia, 1887.

"Transactions of the Association of American Physicians. First Session, Washington, District of Columbia, June 17 and 18, 1886. Francis Delafield, M. D., President; James Tyson, M. D., Secretary; James T. Whittaker, M. D., Recorder. Philadelphia: W. J. Dornan, Printer, 1886.

"A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs." By Samuel W. Gross, A. M., M. D., LL. D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, Philadelphia; Formerly President of the Pathological Society of Philadelphia; Author of a Practical Treatise on Tumors of the Mammary Gland; Fellow of and Formerly Mütter Lecturer on

Surgical Pathology in College of Physicians of Philadelphia; Fellow of the American Surgical Association, etc., etc. Third edition, thoroughly revised, with sixteen illustrations. Octavo: one hundred and seventy-two pages. Cloth, $1.50. Philadelphia: Lea Brothers & Company, 1887.

"Public Health." The Lomb Prize Essay's Award made at the Thirteenth Annual Meeting of the American Public Health Association, Washington, District of Columbia, December 10, 1885, with an Apendex. Second edition. Concord, New Hampshire: Republican Press Association, 1886.

"Abstract from the Transactions of the Medical Society of the State of New York, for the year 1887. Merritt H. Cash Prize Essay; The Physiological Conditions and Sanitary Requirements of School-Houses and School-Life." By A. N. Bell, A. M., M. D., Brooklyn, New York. "*Experto Crede.*" Published by the Society, 1887.

"Nasal Reflexes as a Cause of Diseases of the Eye." By W. Cheatham, M. D., Lecturer on Diseases of the Eye, Ear and Nose, University of Louisville; Eye, Ear, Throat and Nose Physician to Louisville City Hospital. Reprinted from the *American Practitioner and News.* Louisville: John P. Morton & Company, 1887.

"Report of the Committee on Disinfectants. Presented at the Fourteenth Annual Meeting of the American Public Health Association, held at Toronto, Canada, October 5 to 8, 1886." Reprinted from Volume XII of the "Transactions of the American Public Health Association." Concord, New Hampshire: Republican Press Association, 1887.

"Cataract Operations in New York." By Frank Trester Smith, B. S., Chattanooga, Tennessee, late Assistant Surgeon New York Ophthalmic and Aural Institute, and Attending Surgeon to the New York Eastern Dispensary Department of the Eye, Ear and Throat. Chattanooga, Tennessee. Reprinted from the *American Journal of Opthalmology,* April, 1887.

"A Novel System of Operating for the Correctness of the Deflected Septum, by means of an Electric Motor, Nasal Drills and Original Spray-Producing Device, with Illustrative Cases." By William Chapman Jarvis, M. D., Professor of Laryngology and Diseases of the Nose and Throat in the New York University Medical College; Consulting Laryngologist to the Outdoor Department of Bellevue Hospital. Reprinted from the *Medical Record,* April 9, 1887. New York: Trow's Printing and Bookbinding Company, 1887.

"New Treatment of the Affections of the Respiratory Organs and of Blood Poison by Rectal Injections of Gases. After the Method of Dr. Bergeon, Senior Deputy Professor at the School of Medicine at Lyons." By Dr. V. Morel. Translated from the French by L. E. Holman. Price, post-paid, 25 cents. Published by James W. Queen & Company. Philadelphia, Pennsylvania.

"Evacuant Medication (Cathartics and Emetics)." By Henry M. Field, M. D., Professor of Therapeutics, Dartmouth Medical College; Corporate Member Gynæcological Society of Boston; Non-Resident Member New York Academy of Medicine, etc., etc. 12mo: two hundred and eighty-eight pages. Cloth, $1.75. Philadelphia: P. Blakiston, Son & Company. Ann Arbor, Michigan: Andrews & Witherby.

"Congenital Occlusions of the Posterior Nares." By Alvin A. Hubble, M. D., Buffalo, New York, Professor of Diseases of the Eye, Ear, and Throat in the Medical Department of Niagara University; Surgeon to the Good Samaritan Eye and Ear Infirmary; Occulist and Aurist to the Buffalo Hospital of the Sisters of Charity, etc. Reprinted from the *Buffalo Medical and Surgical Journal*, December, 1886.

"The Diagnosis and Treatment of Hæmorrhoids, with General Rules as to the Examination of Rectal Diseases." By Charles B. Kelsey, M. D., Surgeon to Saint Paul's Infirmary for Diseases of the Rectum; Consulting Surgeon for Diseases of the Rectum to the Harlem Hospital and Dispensary for Women and Children, New York. The Physicians' Library, Number I, 1887. Detroit: George S. Davis.

"Earth as a Topical Application in Surgery. Being a full Exposition of its Use in all the Cases Requiring Topical Applications Admitted in the Men's and Women's Surgical Wards of the Pennsylvania Hospital During a Period of Six Months in 1869." By Addinell Hewson, M. D. Second edition, with four Photo-Relief Illustrations. 12mo: three hundred and nine pages. Cloth, $1.00. Philadelphia: The Medical Register Company, 1887.

"The Cremation of the Dead, considered from an Æsthetic, Sanitary, Religious, Historical, Medico-Legal, and Economical Stand-point." By Hugo Erichsen, M. D., Licentiate of the Royal College of Physicians and Surgeons of Kingston, Canada; Member of the Committee of Organization of the First International Crematory Congress; Corresponding Member of the Cremation Societies of New York and Berlin; Foreign Associate Member of the Hygienic Society of the Crematory of Milan, Italy, etc. With an Introductory Note by Sir T. Spencer Wells, Baronet, F. R. S, late President of the College of Surgeons of England; Surgeon to the Queen's Household, etc. Illustrated. 12mo.; two hundred and sixty-three pages. Detroit: D. O. Haynes & Company, 1887.

"Medical Electricity: A Practical Treatise on the Applications of Electricity to Medicine and Surgery." By Roberts Bartholow, A. M., M. D., LL. D., Professor of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia. Third edition. Enlarged and improved. With one hundred and ten illustrations. Octavo: three hundred and four pages. Cloth, $2.50. Philadelphia: Lea Brothers & Company, 1887.

"The Vest Pocket Anatomist (founded upon Gray)." By C. Henri Leonard, A. M., M. D., Professor of the Medical and Surgical Diseases of Women in the Detroit College of Medicine. Thirteenth Revised edition, Enlarged by Sections on Anatomical Triangles and Spaces, Herniæ, Gynæcological Anatomy and Dissection Hints. Cloth, eighty-six illustrations, one hundred and fifty-four pages, post-paid, 75 cents. Detroit: The Illustrated Medical Journal Company, 1887.

"Elementary Microscopical Technology. A Manual for Students of Microscopy. In Three Parts. Part I: The Technical History of a Slide, from the Crude Materials to the Finished Mount." By Frank L. James, Ph. D., M. D., President Saint Louis Society of Microscopists; Member of American Society of Microscopists; Editor *Saint Louis Medical and Surgical Journal.* Octavo. Cloth. Saint Louis, Missouri: Saint Louis Medical and Surgical Journal Company, 1887.

"What to do in case of Poisoning." By William Murrell, M. D., F. R. C. P., Lecturer on Pharmacology and Therapeutics in the Westminster Hospital; Examiner in Materia Medica in the University of Edinburgh, and to the Royal College of Physicians of London, etc. First American from the Fifth English Edition. Edited by Frank Woodbury, M. D., Fellow of the College of Physicians of Philadelphia; Professor of Materia Medica, Therapeutics and of Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. Published by the *Medical Register* Company, Philadelphia, 1887.

"Practical Lessons in Nursing, Maternity, Infancy, Childhood, Hygiene of Pregnancy, Nursing and Weaning of Infants, The Care of Children in Health and Disease. Adapted to the use of mothers or those intrusted with the bringing up of infants and children, and Training Schools for Nurses, as an aid to the teaching of the Nursing of Women and Children." By John M. Keating, M. D., Visiting Obstetrician and Lecturer on the Diseases of Women and Children, Philadelphia Hospital (Blockley); Fellow of the College of Physicians of Philadelphia, etc. 2mo: Extra Cloth, $1.00. Philadelphia: J. B. Lippincott Company, 1887.

"A Treatise on Diphtheria, Historically and Practically Considered; including Croup, Tracheotomy and Intubation." By A. Sanne, Doctor en Medicine, Ancien des Hospitaux de Paris; Member de la Societe Anatomique, Des Societes de Nancy, de Geneve, etc.; Chevalier de la Legion d'Honneur. Translated, Annotated and the Surgical Anatomy added. Illustrated with a full-page colored lithograph and many wood engravings. By Henry Z. Gill, A. M., M. D., LL. D., Late Professor of Operative and Clinical Surgery in the Medical Department of the University of Wooster, at Cleveland, Ohio; Member of the University American Medical Association, etc. 8mo.; six hundred and sixty-five pages. Cloth. Saint Louis: J. H. Chambers & Company, 1887.

"A Manual of Treatment by Massage and Methodical Muscular Exercise." By Joseph Schreiber, M. D., Member of K. K. Gesellschaft der Aerzte of Nienna; Formerly Docent in the University of Vienna; Foreign Member of the Society Francaise D'Hygiene, of the Society D'Hydrologie Medicale of Paris; Corresponding Member of the Society de Medicine et de Climatologie of Nice; Proprietor and Director of the Sanitarium "Alpenheim," in Ausseen, Styria, Austria. Translated, with the author's permission, by Walter Mendelson, M. D., of New York. 8mo.; two hundred and eighty-five pages. Philadelphia: Lea Brothers & Company, 1887.

"Baked Beans: A Serio-Humorous Medical Paper." By Ephriam Cutter, A. M., M. D., Harvard and University of Pennsylvania; Associate Member Philosophical Society of Great Britain; Corresponding Member Society Belge de Microscopie; Honorary Member New Hampshire State Medical Society, California State Medical Society and Gynæcological Society of Boston; Member Committee for Revising United States Pharmacopœia, 1860, American Medical Association; Massachusetts Medical Society, Committee One Hundred, Massachusetts Soldiers' Fund, 1861; Δ Κ F, Φ, 1852, and American Society Microscopists. Albany, New York: Burdick & Taylor, Printers, 1887.

MEDICAL DIGEST.

MEDICATION OF NERVES.

More than a year ago Dr. Corning, of New York, brought to the notice of the profession the following practical and valuable facts regarding the induction of local anæsthesia: First, that the suspension of the circulation in a part into which cocaine has been injected was sufficient of itself to prolong the anæsthesia for any length of time. Second, that when the precaution of suspending the circulation has been observed it is no longer necessary to employ strong solutions of the anæsthetic. He has since employed this knowledge in the treatment of neuralgias and other disorders of the peripheral nervous system. He reports (*New York Medical Monthly*) a practical clinical test of his method which he employed in the treatment of three cases of sciatica of long standing. The first case is illustrative of the others. This patient had previously been treated with galvanism, actual cautery, blisters, fermentations, and baths, but without any considerable benefit.

When seen by Dr. Corning she was suffering from a paroxysm of unusual severity. Copious morphine injections gave only slight temporary relief. All usual measures having failed, he injected one hundred minims of a half per cent. solution of cocaine at two of the more painful points along the course of the nerve and immediately thereafter applied a tourniquet, so as to interrupt the circulation in the femoral artery above the points of the injections. After the lapse of half an hour the pain had entirely disappeared. The tourniquet being removed, no pain was felt even after the lapse of eight or nine hours. The morning following the pain returned, when the injections were made and bandage applied as before, with no return of pain for four days. For three weeks this mode of treatment was persisted in, the periods of exemption becoming longer until the pain finally ceased to return. The second and third cases were treated in the same manner and exhibit every indication of complete recovery. From the study of these cases Dr. Corning arrives at the following conclusions:

(1) That this method of subjecting the nerve to the prolonged chemical action of an adjacent medicament possesses advantages of a theoretical and practical nature which are not easily overestimated.

(2) That this prolonged medication of the nerve, by incar-

ceration of the medicament, is incomparably more advantageous than the ancient expedient of simple injection, without incarceration by suspension of the circulation. In the former case the medicament is held in contact with the nerve for a period of time, which may be prolonged at the discretion of the physician. In the latter case it is a matter of extreme doubt whether the nerve is influenced to any appreciable extent, since the medicinal solution is at once removed by the general circulation, and has, therefore, no time to induce the requisite chemical changes in the nerve filaments.

(3) Solutions of low percentage (one-half per cent. or one-fourth per cent.) should be employed for prolonged medication of nerves, as it is thus possible to inject large quantities of the medicament without danger of constitutional symptoms. It is, moreover, clear that the prolonged presence of this large amount of fluid in the neighborhood of the nerve-stem must inevitably, through the operation of imbibition, profoundly affect the nervous filaments.

(4) The medicated fluid should be injected as near the affected nerve as possible; but care should be exercised not to wound the latter. These profound injections may be accomplished without pain by injecting a small quantity of the anæsthetic before the point of the needle, as the latter is propelled into the tissues.

(5) The treatment by prolonged medication is without danger, and therefore superior to nerve-stretching by the surgical method, which in point of reliability leaves much to be desired.

(6) Cocaine is only one of many fluids which may prove useful when applied according to this method.

THERAPEUTIC PROGRESS.

Dysentery.—Professor Maclean, of India, gives the following directions for prescribing ipecacuanha in dysentery: the patient having been put to bed, twenty-five to thirty grains of powdered ipecacuanha are given in as small a quantity of fluid as possible; a little syrup of orange peel covers the taste as well as anything. The patient should be kept perfectly still, and abstain from drinking for at least three hours. A poultice in the meantime is placed over the abdomen. In from eight to ten hours the ipecacuanha is repeated in a somewhat smaller dose; and, at longer intervals and in smaller doses for several days.

Docker, Evart, Cunningham, Malun and others report great success from its use.

Dujardin-Beaumetz prefers the formula of Delioux for giving ipecacuanha, as follows:

℞.	Powdered ipecacuanha	℥j.
	Boil five minutes in water	℥x.
	Filter and add:	
	Tincture of opium	ʒss.
	Syrup of ginger	ʒviiss.
	Peppermint water	℥j.
M. S.	A tablespoonful every hour.	

Dr. H. C. Wood, of Philadelphia, and Dr. Mackenzie, of London, report surprising results from irrigation of the large intestine with large injections of nitrate of silver, one drachm to one ounce; sometimes a single injection effected a cure. Dr. Austin Flint showed that sporadic dysentery is a self-limiting disease, and runs its course within ten days without medication.

Dr. Goelet recommends *salol and ice-water* enemata in the treatment of dysentery, diarrhœa and intestinal inflammation, and reports the cure of various cases. The dose of salol for an adult is given at ten grains; for a child six months old or under one-half grain every two hours. The dose for children being much larger in proportion than for adults.

DIARRHŒA: CATARRHAL.—Dr. William Pepper endorses nitrate of silver in pill form, one-sixth to one-fourth of a grain. It should be continued for two or three weeks at least, but it may be given in small doses during several months, with intermissions, without danger of silver staining.

Dr. W. W. Johnston recommends cold water rectal irrigation as having a sedative and astringent influence, and when properally used of great advantage to both children and adults. A long rectal rubber tube should be used and the water made to enter the rectum as high up as possible. The number of stools lessens almost immediately after this treatment.

Dr. Strümpell, in his work, gives the following prescriptions:

℞.	Opium	gr. ss.
	Acidi tannici	gr. j.
	Sacchari albi	gr. j.
M. S.	As a powder two or three times a day.	

℞.	Decoction radicis calumbæ	℥v.
	Extract opii	gr. j.
	Sprup aurantic	℥ss.
M. S.	Tablespoonful every two hours.	

Monneret gives subnitrate of bismuth in excessive doses, five drachms to one ounce a day.

Dujardin-Beaumetz says opium is the an-exosmotic substance *par excellence*, and that the two best preparations are diascordium and laudanum. He prescribes in his hospital practice:

℞.	Wine of opium	gtt. x.
	Subnitrate of bismuth	grs. x.
	Peppermint water	grs. x.
	Distilled lettuce water	grs. lxx.
	Syrup of rhatany	grs. xxx.

M. S. One tablespoonful when required.

Bouchard highly recommends iodoform and charcoal powder.

Simon, Guyot and Potain have shown that in malarial diarrhœas, the "sulphate of quinine cures as by enchantment."

Dr. Thompson's modification of the old Hope's Diarrhœa Mixture is very efficient in many cases:

℞.	Dilute nitric acid	ʒiv.
	Tincture of camphor,	
	Tincture of opium, āā	ʒjss.
	Syrup of ginger	℥j.
	Cinnamon water, ad	℥iv.

M. S. Two teaspoonfuls in a little water.

Drs. Bond and Edwards recommend in the *Practitioner* the tincture of cannabis indica in the treatment of summer diarrhœa. It is stated to possess advantages of not interfering with the digestive functions, but on the contrary to accelerate their return. The dose given is ten minimes in conjunction with other remedies.

Naphthalin is acquiring a good reputation as an efficient remedy in the treatment of diarrhœa, when it is due to disturbance in the small intestine. Adults can take five to fifteen grain doses with glycerine and charcoal.

Pichini successfully treated eight cases, with signs of fermentation, with the following:

℞.	Iodoform	grs. ix.
	Ether	℥3⅛.
	Vegetable charcoal, finely powdered	℥3⅛.
	Glycerine, ad	℥xii.

Dissolve the iodoform in the ether; thoroughly mix in the powdered charcoal; add the glycerine after ether has evaporated. Teaspoonful or tablespoonful every twenty-four hours in a glass of water.

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ORIGINAL ARTICLES.

A CASE OF METRORRHAGIA WITH ORGANIC HEART DISEASE.

BY HARRIET L. HARRINGTON, M. D., BOSTON, MASSACHUSETTS.

Flora W., thirteen years. At six years of age she had rheumatic fever, which left her with organic heart disease. I first met patient professionally two years ago; found her very nervous, and irritable, not at all strong, with a decided mitral murmur. About a year ago she suffered for several weeks from a severe attack of pericarditis. During this illness she could not lie down, was propped up in a chair day and night, and kept under the influence of morphine, which was the only thing that relieved her. It was thought impossible at that time for her to recover. After this she improved in health, and was doing nicely until she commenced to menstruate in October, 1886. Her flow was profuse and irregular, lasting from eight to twenty-one days, with one to three weeks intermission. There was dysmenorrhœa, with a great deal of abdominal tenderness. In December I prescribed a mixture of iron and quinia, asking the mother to let me know when the flow commenced again, which she did on January 4, 1887. I found patient flowing a little, free from pain, pulse full and strong, had vomited once, she had been having frequent epistaxis during the past two months. I gave ergot, ten drops, three times daily, to be increased if needed. On the 5th her nose bled freely for an hour, but was arrested finally by ice to nape of neck and bridge of nose. The child was deathly white and pinched-looking, eyes dark and staring. Ergot, twenty drops, with tincture digitalis, five drops, was given every three hours.

January 6: Flow has increased, she has had epistaxis during the night. The ergot nauseates her, but she keeps it down. I gave suppositories of morphia sulphate, one-eighth of a grain every six hours, as she did not sleep during the night. On the morning of the 9th she had a decided chill lasting twenty minutes. Temperature, 104.3°; pulse, 120 to 140; respiration, 36 (no fever previous to this); skin hot and dry, lips and mouth parched, breath very offensive, no pain, vomited once. Dr. T. saw the child with me, in consultation. He said she had as much as she could possibly stagger under, and that recovery was doubtful. Examination of heart at this time revealed, besides the organic mitral murmur, aortic and pulmonary anæmic murmurs, due to the extreme weakness from loss of blood.

℞. Norwood's tincture veratrum viride.
S. One drop three times daily.

Symptoms to be watched carefully; also:

℞. Pil. quin. sulph.. grs. ii.
S. Four daily if she can bear them.

January 10: Temperature, 102°; pulse, 100. Had vomited eight times since my last visit (about twenty-four hours), vomit very green looking; generally does this from sympathy whenever her heart is troubling her; she has used three suppositories, during the night she slept a little; has complete anorexia. On the 11th: temperature, 98.4°; pulse, 80; nasal hæmorrhage lasting on and off for four hours during night; is still flowing but not as freely; sitting up in a chair with pillows, as she cannot lie down. Veratrum reduced to one drop daily, quinine pills to three daily.

January 12: Cathartic pills given, as her bowels had not moved for four days; more simple remedies had failed. After her bowels moved freely she took more nourishment. On the following day, as the flow continued, I stopped the ergot and gave

℞. Acid. sulph. aromat.
S. Ten drops every four hours.

January 14: By advice I went back to the ergot again, giving it with tincture belladonna, as follows:

℞. Ext. ergot, fluid.. 20 gtts.
Tinct. bell.. 5 gtts.
S. Every four hours.

January 18: Had ten towels during the past thirty-six hours, is also suffering from the constitutional effects of the belladonna, throat and nose dry, pupils dilated, eyes bright, has also complained of queer feelings. The ergot and belladonna were both discontinued, and the aromatic sulphuric acid tried again, thoroughly but without benefit.

On the 20th she had twelve towels in fifteen hours, and by the advice of another physician I tried the ergot for the fourth time, giving it with extract hamamelis, each one-half teaspoonful every three hours. During the next twelve hours she used ten towels. I then insisted on an examination which had been refused before. This revealed bands of adhesions to right, uterus small and slightly anteverted. As the mother objected to hot douches, thinking the child too weak, I used vaginal injections of tannate of glycerine, also introduced a pad. The following day the flow was not as profuse, but she vomited constantly, not being able to keep anything on her stomach. I then discontinued the ergot mist, as ergot in any form has seemed to increase the flow, but gave the quinine pills, three daily, also aromatic spirits of ammonia for the nausea.

January 24: For two days the tannin seemed to be checking the flow, but during the past twelve or fifteen hours she has had to be changed every hour, and the nausea continues. Three to four quarts of water as hot as could be borne was then given in a vaginal douche. Tannin being added to the last quart. Egg and milk given by enema. Quinine pills stopped.

January 25: Only two towels during the past twelve hours, but vomiting continues. I then ordered all nourishment to be given by enemata. Iced ginger ale by mouth to relieve the thirst, also bismuth subnitrate, fifteen grains every four hours. I repeated the hot vaginal douche. On the 26th as she seemed very weak, and the flow was less, I omitted the hot douche, but on the 27th as the flow was increasing I gave it, using a great deal of tannin with it. On the 29th she craved food again, kept down a little cold milk.

January 31: Commences to take nourishment again, and retains it. Wine was ordered, flow has almost ceased, douches discontinued, as they weaken and disturb her a great deal.

February 1: 6 P. M.—I was sent for in haste and found patient suffering much from mind; this was soon relieved by massage, and aromatic spirits of ammonia in hot water. She had not urinated for ten hours.

February 3: Is suffering greatly from prostration, but retains food, complains of pain in back and head.

February 5: Seems better, but vomits a great deal of yellowish-looking substance.

℞.	Hydrarg. chlor. mite	grs. ii.
	Soda bicarb	grs. x.

M. et div. powder number six. S. Take one every hour.

February 7: Has not vomited since taking the powders, which caused a free evacuation from bowels. Flow has entirely ceased, having lasted thirty-four days.

February 9:

℞.	Ferri et quin cit	ʒiiss.
	Tr. nucis vom	ʒiss.
	Glycerine	℥i.
	Aqua	℥iii.

M. S. Teaspoonful three times daily before meals.

Pulse stronger, 140; is sitting up; a little excited by my visit.

February 13: Was dressed for the first time in five and a half weeks, eats ravenously, everything tastes good to her. I do not allow her to take any steps, but she seems more quiet, and satisfied if her clothes are on, is very pale, but bright. She passes a large amount of urine, but it is normal, drinks a great deal, both probably due to the impoverished condition of her blood.

From this time on she improved rapidly, but did not menstruate again for four months; has gained what flesh she lost during her illness, also ten pounds besides. Examination of heart shows only mitral murmur, as before illness. In this case nothing did as much good towards checking the hæmorrhage as the hot vaginal douches.

August 20: When heard from a few days since, patient had flowed regularly for three months past, although profusely.

CLINICAL LECTURES.

TREATMENT OF SYPHILIS.

BY G. FRANK LYDSTON, M. D., CHICAGO, ILLINOIS.
Lecturer on the Surgical Diseases of the Genito-Urinary Organs, and on Venereal Diseases, in the College of Physicians and Surgeons, Chicago.

REPORTED FOR THE PHYSICIAN AND SURGEON BY SPECIAL STENOGRAPHER.

GENTLEMEN: There is a strong tendency on the part of most teachers upon the subject of therapeutics, to speak only of the good effects which are claimed to result from the administration of various drugs, and to avoid the discussion of those evil effects which are likely to occur at the hands of the inexperienced or careless practitioner. This I believe to be wrong, and I will therefore state with reference to mercury, that it is a drug which must be used with great circumspection. You will meet with a very firm and fairly well grounded prejudice against its use, existing in the minds of the laity. We must, of course, take into consideration the fact that many of the alleged evil results of mercury are due to the fact that its use has not been faithfully persisted in for a sufficient length of time, but with all this, there is undoubtedly a certain proportion of cases in which serious injury to the system of the patient may be justly laid at the door of this remedy. With proper care, however, I venture to assert that there is no drug which is safer or more reliable, and I have yet to see a single case of permanent injury resulting from the drug, when properly used. We occasionally meet with cases in which mercury has a very unsalutary effect upon the patient, in the form of intense mental and emotional depression, even when very moderate doses are given. In such cases it may be necessary to give tonics and even stimulants in order to counteract this condition.

One of the most frequent of the injurious effects produced by mercury is ptyalism. Salivation in any marked degree is always injurious, and no greater effect should be produced than a slight redness and tenderness of the gums, with a slight increase in the salivary secretion, a coppery taste in the mouth, and what is often a good indication to diminish the amount of mercury, a sensation as if the teeth were too long. To this latter symptom I desire to direct especial attention. Ulceration of the cheeks or gums sometimes occurs without previous salivation, but this is quite rare. To prevent these annoyances, the mouth and teeth ought to be thoroughly put in order by the dentist, prior to beginning treatment. Tartar should be removed and the teeth cleaned, and all those which are decayed, either extracted or filled.

The causes of salivation are, idiosyncracy with moderate doses of mercury, or large doses without idiosyncracy. Diseases of the mouth and gums predispose to it, and sometimes exposure to cold and wet during a mercurial course will bring it on. When salivation occurs, it requires treatment. Of course the first thing to do is to stop the mercurial. The chlorate of potassium may be given internally, and a mouth wash used, composed of the chloride of potassium and tincture of myrrh, in the proportion of one drachm of the potasso-chloride and one ounce of tincture of myrrh to four ounces of water. Glycerine may be added if desired. Remember to specify the chloride, and not the chlorate in this mixture. In some severe cases of salivation, the patient cannot swallow solid food, and whether this be the case or not, fluid aliment is indicated. I hope that you may see a case of mercurial salivation sometime, in the practice of somebody else, as a sort of warning to you regarding the abuse of a really excellent drug. The fetor of the breath in these cases is something horrible, and is due to the presence of decomposing fat in the saliva, produced by the action of mercury upon the tissues, and eliminated by the salivary glands. In some cases of mercurial stomatitis, the cheeks, tongue and lips are fearfully swollen, perhaps ulcerated, and covered with a yellowish pultaceous deposit, which is eminently characteristic.

You will find in certain instances chronic pains of a rheumatic character, muscular and articular, resulting from mercury, and I have learned by experience, that when a patient who is taking much mercury, begins to complain of vague pains in the forearms and legs, it is time to drop it, and give iodine. There is one peculiar fact which I must mention, and that is, that some patients complain bitterly of pain in the heels, and sometimes the soles of the feet, similar to that which occurs in gonorrhœal rheumatism. This I firmly believe to be due to mercury. When your patient complains of his feet being tender, lessen the amount of mercury, and give the iodides, if you would save yourself trouble. There is a serious question in my mind whether some of the ulcerations of the mouth and tongue in the latter periods of syphilis may not be due to mercury. I see many such cases in which the continued use of the drug appears to make matters worse, and I find that when iodides are substituted, improvement at once occurs. This might be attributed to the action of the iodine in liberating and revivifying, so to speak, the latent mercury, but I doubt it being the correct explanation. The use of the iodides in syphilis require some special notice. The active element in the iodides, is supposed to be the free iodine which is liberated in the system, but there seems to be some difference in the degree of effect exerted by the various salts. The potassic iodide is the most powerful, but is the most liable to produce gastro-intestinal irritation. This does not, however, impair its usefulness to a great extent, for it is the most generally used of all the preparations of iodine. The sodic salt is milder, and is a useful substitute for the potassic iodide, where the patient has a feeble or irritable digestive apparatus. The iodides are often and successfully used in combination, the ammonium iodide being combined with the iodides of potassium and sodium. Pure iodine is useful, but often too irritating.

It is the custom with most practitioners, to use iodine and its preparations only in the late periods of the disease, and chiefly in tertiary lesions, but it will be found that many cases of obstinate secondary lesions will not yield until the iodides are given. As I have already stated, it is well to give a few weeks' course of the iodides from time to time, throughout the course of mercurial treatment. A small amount of the biniodide may be given at the same time, if thought best. In cases of precocious syphilis, in which destructive lesions or nervous changes come on early in the disease, the iodides are our chief reliance. It is in late syphilis, however, that the iodides will be found most reliable, especially if combined with mercury in the form of "mixed treatment." Gummy lesions require an excess of the iodides, but in all cases, after the serious lesions are under control, a prolonged mild mercurial course should be instituted. This is the proper method of treating the deeper lesions of the brain, spinal cord, bones, viscera, testicle, etc., the tubercular lesions of various kinds, the various scaly eruptions, and those later syphilides which tend to aggregate themselves in groups, or to become particularly obstinate. As an example of the formulæ for the mixed treatment, I will give you quite a popular combination.

℞.	Hydrarg. bichloridi........	gr. iv.
	Ammon. iodidi....................	ʒiii.
	Kalii iodidi..	ʒvji.
	Tr. cinchonæ co. or syr. sarsap. co..........	℥viii.

M. Sig. Two drachms in a wine glassful of water after each meal.

Professor Gunn's "three-eights" mixture is an excellent one for the administration of iodine. It is as follows:

℞.	Iodinii resubl......................................	gr. viii.
	Potass. iodidi..	ʒviii.
	Syr. sarsap. co..	℥viii.

M. Sig. Dose, one drachm.

Always instruct your patients to dilute these preparations well before taking, as they are all more or less irritating to the stomach, and as far as possible, to take them after meals. In some instances, however, in which the patient's digestive organs are not very sensitive, the iodides may be taken with advantage while fasting, especially if combined with a vegetable bitter, like quassia or cinchona. In the formula which I have given you for the mixed treatment, you are likely to criticize the combination of incompatibles and the administration of the irritating bichloride, but if you reflect, you will see that the ingredients are rationally compatible, although not chemically so. We have a chemical reaction in the mixture, which results in the formation of the biniodide, which is very active by virtue of its being in the nascent condition. When it is necessary to push the dose of the iodides, do so by adding a saturated solution of sodic or potassic iodide, to be taken in doses of five drops thrice daily to begin with, and to be subsequently increased, one drop daily at each dose, until the limit of tolerance has been reached, or until the symptoms yield, when the dose may be reduced, the favorable result meanwhile continuing. It is sometimes necessary to use mercurial inunctions in addition to the iodides, and the local application of the oleate sometimes assists in the cure of the lesions amazingly.

The deep-seated ulcerations,—especially those of the throat, —syphilis of the bones, and syphilis of the brain and cord, often require enormous doses of the iodides before they exhibit any signs of yielding. In the venereal wards of the New York charity hospital, a daily dose of two or three hundred grains of potassic iodide was nothing unusual, and Van Buren relates a case in which nine hundred grains were given daily for eleven days. In my own service we had several cases in which the drug was increased to a daily allowance of four hundred grains. I must acknowledge, however, that I was never fully satisfied as to the purity of our hospital drugs, and Van Buren himself told me that he did not believe it possible for a patient to tolerate the amount of iodide which we so commonly gave at the hospital, if the drug were pure. It would seem that a pair of kidneys would be rather worthless, after eleven days work at the daily elimination of two ounces of the iodide. Making due allowance for adulterations, the doses which some patients will tolerate, are amazing. I have one patient who has taken three hundred grains daily for nearly three weeks, and I am certain that the drug is perfectly pure. On the other hand, we meet cases which will not tolerate even small doses of the iodides.

The most important of the evils which may be caused by the iodides is the condition known as "iodism." This consists in a feeling of depression and malaise, nervous irritability, tinnitus aurium, neuralgic or rheumatic pains in various situations, especially in the bones and muscles, and irritation of the various mucous surfaces, especially those of the eyes and nose. The latter symptom may be merely a mild coryza or may amount to a very severe inflammatory œdema of the conjunctiva, nasal and lachrymal apparatuses. Severe diarrhœa and vomiting, with severe griping pain, may occur from the irritant action of the drug, and may necessitate its complete suspension for a time. Often, however, the treatment may be continued by substituting the sodium for the potassium salt, limiting the diet to rice and milk, and giving large doses of the subnitrate of bismuth. When given as I have already suggested, by beginning with small doses and gradually increasing until the limit of tolerance is reached, there is usually little difficulty in administering large doses of the iodides.

Eruptions of the skin are liable to occur from the iodides, and some patients appear to have an idiosyncracy which renders them peculiarly liable to the occurrences of eruptive phenomena, even when quite small doses are given. I have a patient at the present time who cannot take the iodide in ten-grain doses for a day, without the development of red painful swellings upon his limbs. In the same way we find patients who are liable to extreme iodism, from very small doses. A professional gentleman of my acquaintance cannot tolerate the drug in doses of two or three grains without the development of a severe coryza in a few hours.

There are three principal forms of eruption which may result from iodine and the iodides, namely, acne, erythema, and purpura. Of these eruptions, acne is the most frequent, and may be slight or quite extensive, the pustules varying from the size of the head of a pin, to quite extensive phlegmonoid abscesses. Erythema when it occurs, is usually situated upon the nose, cheeks or forehead, and is followed by branny desquamation. It may, however, run into eczema. Any of these forms of eruption may be attended by considerable heat and itching.

Severe and well-marked purpura hemorrhagica, is occasionally noted in cases of tertiary syphilis treated by large doses of the iodide of potassium. In such cases we have the combined evil propensities of the syphilitic cachexia, and large doses of the iodine, to explain the profound blood changes to which the purpuric extravasations are ascribed.

All of the evil effects of the iodides rapidly disappear upon the cessation of the drug, and the administration of such tonics as quinine, iron, and cod-liver oil, with free doses of such diuretics as the citrate or acetate of potassium. The cause of the evil phenomena described, is usually defective action of the kidneys, hence the advisability of promoting free diuresis during a course of the iodides. Acne, in certain special cases of idiosyncracy, may be prevented by the administration of Fowler's solution of arsenic, conjointly with the iodides.

There is a great tendency on the part of the profession, to recommend various new and questionable preparations in the treatment of syphilis. Certain vegetable preparations have enjoyed a more or less long-lived popularity in this respect. Sarsaparilla was long thought to be a specific. Among the new preparations are cascara amarga, herberis aquafolium, stillingia, and other drugs, alone or in combination. I advise you to try these drugs, in the firm belief that you will soon discover their fallacies, and come back to our reliable friends, iodine and mercury. As bitter tonics they are more or less useful, but as specifics they are arrant humbugs. Tayuga is another remedy of doubtful origin which was recommended some years ago, and which Dr. J. Nevins Hyde, of this city, after giving it a fair trial in syphilis, claims negative results. The bichromate of potassium has been recently recommended, but I have had no experience with it. It is best to be liberal, and give different remedies a fair trial, irrespective of their origin, and such has been my custom, but I think you will find that the proportion of cases of syphilis which is curable by the judicious use of mercury and iodine, is so large, and so gratifying, that you will waste no unnecessary time upon new and strange drugs.

Two remedies which are decidedly beneficial as a tonic in syphilis, are the fluid extract of coca, and iodoform. Coca is an excellent tonic when used conjointly with strictly antisyphilitic treatment, and tends decidedly to relieve the nervous depression from which most syphilitics suffer. Iodoform will be found most useful in cases which do not tolerate mercury and iodine well, and should be combined with the exsiccated sulphate of iron or the iron by hydrogen, the latter perhaps being the most useful and convenient.

In conclusion I desire to direct your attention to the local management of the disease. Mucous patches sometimes give great annoyance, and refuse to yield to purely constitutional treatment, becoming sluggish and indolent. In such an event, the pure acid nitrate of mercury will be found to be the best application. Before applying it, the lesion should be dried with a piece of bibulous paper or absorbent cotton. The surface should then be thoroughly cauterized, after which it is again dried. The nitrate of silver may be used in the same manner. Sometimes cauterization is not tolerated, the sore becoming inflamed and irritable. In such cases the tincture of benzoin coca will be found most effectual. It coats the lesion with a deposit of the gum benzoin, and in addition to its mildly stimulant and antiseptic action, protects the surface from irritation. When mucous patches hypertrophy, and form tubercles or cordylomata, an application of hydrangea bichloride in collodion in a strength of four to twenty grains to the ounce, will be found to remove them very rapidly. Calomel, zinc oxide, salicylic acid and iodoform are also quite useful applications. Washing the parts in salt and water followed by the application of calomel is also of service, as nascent bichloride is formed and acts very powerfully upon the lesions. In case of secondary or even tertiary lesions upon the face which are non-ulcerative, the solution of bichloride in collodion will be found to remove them quite rapidly. Be careful, however, not to cause severe blistering of the skin by too powerful or too frequent applications. In case of ecthymatous or rupial ulcerations, frictions with the oleate are beneficial. Gummy ulceration, especially when situated in the mouth or pharynx, will be best treated by the application of benzoin. Although iodoform is also quite effectual, it is far more unpleasant, for most people do not like to have such an odorous application, in so close proximity to their nasal and digestive organs.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY GEORGE GUNDLACH, M. D., ANN ARBOR, MICHIGAN.

CAUSE AND AVOIDANCE OF CORROSIVE SUBLIMATE POISONING IN OBSTETRICAL IRRIGATION OF THE UTERUS AND VAGINA; TO DIMINISH THE DANGER OF SEPSIS TO THE LYING-IN.

In a paper upon the above subject Dr. Otto Von Nerff arrives at the following conclusions:

(1) It is safe to state that the vagina, either from the contraction of the sphincter vaginæ, or of the levator ani, sometimes becomes distended and retains a considerable quantity of the injected fluid.

(2) After irrigation of the vagina or uterus of the parturient, symptoms of intoxication is caused chiefly by absorption of the injected fluid by the mucous membrane of the vagina, as the uterus soon contracts firmly after injection, consequently the danger of absorption through it is very slight.

(3) Absorption from the vagina is not possible, unless the disinfected fluid is retained a considerable time, but is favored if during its retention there is at the same time increase of pressure in the vagina, which condition does not exist at the time of the injection.

(4) In the recorded cases, the accounts show that it is probable the absorption was principally by the vagina, in two cases particularly, vaginal irrigation only having been resorted to.

(5) Direct entrance of the corrosive solution into the peritoneal cavity, or into the blood-vessels, results from long retention of the fluid, with increased pressure in the vagina from contraction of its walls, or when an unusual patulency of the Fallopian tubes exist; this, however, is a rare condition, and the occurrence can only happen with imperfect escape of the injected fluid.

(6) It is always important, in all vaginal and uterine irrigations of corrosive sublimate solution, to use every care possible to secure free escape of the fluid, in order to prevent it being held in the uterus, especially in the vagina, where the greater danger exists, due to the possible increase of pressure, by contraction of the vagina.

To further lessen the danger of septic poisoning to lying-in patients the author advises the following precautions:

(1) Careful disinfection of the physician, the midwife and attendants.

(2) At the commencement of labor, careful washing of the external genitals with weak solution of corrosive sublimate, and cutting off the hair on the pubes.

(3) Prophylactic irrigation of the vagina, in the course of normal labor, is not necessary. If there is reason to suspect infection on the part of the midwife, or of beginning decomposition of the discharges during the course of a tedious labor, injections of the vagina with a weak solution, one to five thousand or one to three thousand, should be made.

(4) After normal labor, prophylactic uterine injections are unnecessary. In unusual conditions only as follows: After the introduction of the hand into the uterus, or if decomposition from any cause has taken place in the uterus, or results of conception be dead or putrefying, the uterus at the termination of labor should be irrigated with a weak solution of corrosive sublimate, of the strength above stated.

(5) When the confinement and labor are normal, disinfection with corrosive sublimate solution is unnecessary, and may

be harmful under some circumstances. Such injections, however, are not to be omitted if it be probable that by their use a possible infection may be avoided. On the other hand, puerperal diseases and conditions which require intra-uterine treatment, irrigation of the genitals with mild or strong solution of corrosive sublimate is demanded and immediate good results usually follow.

(6) The stronger solutions of corrosive sublimate, one to one thousand especially, are not necessary, only in special conditions—the occurrence of severe septic puerperal fever.

(7) In all irrigations by corrosive sublimate, vaginal and uterine, either by weak or strong solutions, the following rules are to be strictly carried out:

(1) Only small quantities of the irrigating fluid are to be used, one, and at the most, two quarts.

(2) Irrigation should be conducted as rapidly as possible.

(3) Pre-eminently, free escape of the fluid must be obtained, during and after the injection, to avoid the bad results of retention and production of increased pressure above mentioned.

(8) In atony of the uterus, and in extensive wounds of the genital canal, irrigation by solutions of corrosive sublimate are strictly contra-indicated; in anæmic patients and such as suffer from kidney disease; and in women who have been in any manner previously treated with mercury, irrigation is to be used with great care.—*Archiv fur Gynækologie.*

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

SERVICE OF DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the Medical Department of the University of Michigan.
REPORTED BY W. P. MUNN, CLINICAL CLERK.

VARICOSE ULCER.

Louisa B., aged twenty-eight. Admitted June 1, 1886.

History.—Four years ago while running, she struck her left ankle with the heavy shoe on her right foot. In a few days the bruised spot ulcerated, and became quite painful. She was treated nearly five months in the hospital at Gerifinald, Germany, where she was benefited but not cured. She had phlegmatia dolens of the left leg about five years ago.

Present Condition.—Just above the inner malleolus is a circular blue spot as large as a silver dollar. It is very painful on pressure, the patient shrinking at the slightest touch.

June 3.—Clinic: Professor Maclean diagnosed the affection a varicose ulcer, and ordered a dressing of black wash, (calomel, three grains; lime water, one ounce); and the application of the rubber bandage.

June 11: There has been little or no improvement.

June 14.—Clinic: A circular incision was made in the sound skin around the ulcer extending just through the skin.

June 23: Painful condition greatly improved but not wholly corrected. Wound healing rapidly.

June 30: Little tenderness. Wound healed. Discharged.

LYMPHADENOMA.

John N., aged eighteen. Admitted May 18, 1886.

History.—Eleven months ago a cystic tumor was removed from behind the ramus of the inferior maxilla, right side. The tumor appeared suddenly and was growing very rapidly. Two months ago another tumor began to grow in the same place and has rapidly increased in size. One month before this second tumor appeared on the right side, one similar to the first came in the same position on the left side, which disappeared under medical treatment.

Clinic.—The present tumor is deeply attached and intimately connected to the adjoining tissues. Other smaller enlargements are found forming a chain along the sterno-mastoid muscle.

No operation justifiable. Advised to keep clear of the knife and quacks. Ordered to take arsenic and iodide of mercury.

GENERAL CORRESPONDENCE.

PARIS LETTER.

PTOMAINES AS CAUSES OF ERROR IN TOXICOLOGICAL RESEARCH—THE ACTION OF CHLORIDE OF ETHYLENE ON THE CORNEA.

PTOMAINES AS CAUSES OF ERROR IN TOXICOLOGICAL RESEARCH.

At the meeting of the Academie de Médicine held June 28, 1887, M. Bronardel read a communication of MM. Ogier and Minorici on ptomaines as causes of error in toxicological research, of which the following is a résumé:

(1) The liver and kidneys furnish residues that have in general the same reactions.

(2) The most abundant residues are furnished by amylic alcohol (alkaline solution),—and by benzine and chloroform (acid solution),—petroleum (hydride of hexyle) takes nothing or next to nothing away from alkaline solutions.

(3) In one case only (a fœtus of seven to eight months presenting no signs of putrefaction), the residues showed no alkaloid reaction. In all the others, more or less of basic substances were obtained, precipitated by general reagents; (by far the most sensitive of these reagents is iodide of potassium iodided). The residues are considerable from viscera in which putrefaction has hardly commenced (bodies of two to four days in summer); more abundant from viscera in active putrefaction (bodies of eight to twenty days): beyond a certain limit of putrefaction (bodies exhumed after two years or more), the quantity of ptomaines diminishes ostensibly.

(4) The tabular results of these experiments show the amount of confidence that may be given to different colored reactions in the search for vegetable toxic bases, and the influence of ptomaines on the reaction; for example: perchloride of iron has never given any coloration; it is therefore a good reagent for morphine. Alcoholic potash, after oxydation by nitric acid, never gave a violet reaction, comparable to that of atropine. Nitric acid alone often gives yellow or orange coloration, much less intense than that obtained with benzine, but capable of being confounded with the tint that would be given by a trace of morphine. The use of reagents containing a large excess of sulphuric acid (molybdate, vanadate, selenite, etc.) is rendered very uncertain by the presence of ptomaines; for mixed tints are obtained, reddish or inclining to violet; and very often identical with those given by sulphuric acid alone. With bichromate of potash and sulphuric acid, on one occasion only, a violet tint was obtained similar to that given by a trace of strychnine; with alcoholized sulphuric acid and perchloride of iron, certain residues gave greenish tints, capable of being confounded with those of digitaline under similar circumstances.

Without giving undue importance to these causes of error, it is necessary to take them into consideration: the tints due to the presence of ptomaines are never as decided and as evident as similar tints produced by vegetable bases. Besides, one colored reaction does not suffice to arrive at a conclusion; it is necessary to consider the chemical and physiological facts.

THE ACTION OF CHLORIDE OF ETHYLENE ON THE CORNEA.

In the *France Médicale* of July 5, 1887, MM. R. Dubois and L. Roux publish the results of their researches on the action of chloride of ethylene on the cornea, which was the subject of a communication to the Academy of Sciences.

The interest of these researches is principally in the strange fact of the experimental opacification of both corneæ, under influence of an agent administered through the respiratory organs. The animals experimented upon were dogs that were made to inhale the vapors of chloride of ethylene for a period not exceeding one hour and a half. During that time the eyes presented nothing particular, except a considerable diminution of intraocular pressure and an irregular astigmatism already noticed by M. Dubois in prolonged chloroformic anæsthesis. But in anæsthesis by chloride of ethylene, these modifications are much more apparent.

The cornea remains transparent as long as the inhalation continues, and afterwards, as long as the animal throws off by the lungs the anæsthetic. But, after from sixteen to eighteen hours, sometimes less, the two corneæ lose their transparence, take a bluish opalescent tint and give a strange expression to the animals physiognomy. On the two dogs in question this strange effect took place during the night and was first observed in the morning on their awakening. No other disturbances were observable. The inhalator had been so arranged that the anæsthetic vapors could have no direct contact with the eye.

One of the animals was killed, the other kept under observation since a fortnight. Both presented the same symptoms. In the dog still living, the tension of the ball of the eye is still considerable, although less than the first days. The maximum of intra-ocular tension was attained at the moment of the production of the cornea opacity.

The curvature of the cornea is evidently exaggerated, principally along the vertical meridian, causing a regular astigmatism, easily appreciable with the disc of Placido. At the moment the opacity of the cornea was first noticed, there was no trace of irregular astigmatismus; the surface of the cornea had preserved its polish, but examined through a magnifying glass very numerous minute depressions were observable all over it. The general aspect is that of total anterior staphyloma, opaque and symmetrical, of both eyes.

Vision subsists, but is rather dimmed by the opalescence of the cornea. The ophthalmoscope shows that the crystalline lens is still transparent, but the details of the back of the eye are not distinguishable. The oculo-pupillar reflex is retained, as is also the oculo-palpebral reflex. The sensitiveness of the cornea and of the retina did not appear to have been affected. For the last two days there is amelioration in the state of the cornea. At the outset the opacity was uniform, but at present under the ophthalmoscope with a strong light, numerous whitish aborisations are discernable, the direction of which radiates from the periphery towards the centre.

The experiments of M. Ranvier at the College de France on the cornea of animals sacrificed, having shown that the cornea may lose its transparence when subjected to pressure, it is not impossible that the variations of intra-ocular pressure noticed may be the cause of the opacity produced on the *living animal.*

The question suggests itself whether in this case it is not a *dishydratation* (?) of the cornea more particularly of certain constitutive elements of that membrane, the more so that M. R. Dubois has already proved the powerful dishydrating action of anæsthetic vapors on animal and vegetable tissues. What seems to confirm this view, is the remarkable loss in weight of the animals experimented upon, unexplainable by an exaggeration of the phenomena of assimilation or by refusal of food.

These observations are most interesting and augment the list of those accidents so little understood, that so suddenly supervene at the moment that the economy is getting rid of a poison, and which differ so entirely from those produced by the penetration of the poison into the system.

EPITHELIOMA DUE TO LACERATION OF THE CERVIX: A CORRECTION.

Editor of THE PHYSICIAN AND SURGEON:

DEAR DOCTOR—In the June number of your journal, page 280, under "Lacerated Cervix the Cause of Epithelioma," the following statements are made: "Dr. Walter Lindley says that Dr. Emmet regards lacerated cervix with cystic degeneration a condition closely related to malignancy." With this I agree, but when he further states: "Dr. Emmet emphasized this with the positive statement 'that there is no epithelioma of the uterus except after lacerated cervix,' and when all physicians learn the importance of operating on the lacerated cervix, epithelioma of the uterus will be a disease of the past." I think Dr. Emmet is credited with saying too much, and that the statement needs correction. I do not have access to all that Dr. Emmett has written, but find that he does say: "I believe that nearly all if not all cases of epithelioma, or cauliflower growths have their exciting cause or origin in a laceration of the cervix."—"Principles and Practice of Gynæcology," third edition, page 509.

In this connection I wish to record a case under observation that I have diagnosticated epithelioma of the cervix, and the diagnosis has been confirmed by an eminent specialist. Mrs. C., aged forty-two. Menstruated at fourteen; menstruation has never been irregular; married at twenty-three; was never pregnant; never passed anything from the uterus to cause a laceration.

This case verifies what Dr. Theophilus Parvin says on the subject: "It is an error to assert that nearly all, if not all, cases of epithelioma of the cervix have their exciting cause or origin in a laceration."

I would like to hear from other physicians to know if their experience shows that we are so near the millenium that, "operating on the lacerated cervix," will cause, "epithelioma of the uterus to be a disease of the past."

F. J. GRONER, M. D.

BIG RAPIDS, MICHIGAN, August 16, 1887.

INFORMATION ON DIPHTHERIA FROM THE MICHIGAN STATE BOARD OF HEALTH.

ONE WAY TO SPREAD DIPHTHERIA.

Information just received at the State Board of Health office illustrates the immense importance of extreme care in dealing with contagious diseases. A young man whose parents live in Brighton, died in Detroit a few weeks ago after a week's sickness. The attending physician called the disease at various times, "putrid sore throat," "gangrenous sore throat," and "ulcerative tonsilitis." He died of failure of the heart, a common mode of death in diphtheria. The remains were sent to Brighton, and on the casket was a certificate that he died of "blood clot." As the boy was well known in Brighton, it was proposed that the high school go in a body to his funeral, but the principal of the school, and the health officer of the village, suspecting that all was not right, vigorously objected to any children attending the funeral. About August 1, the lady with whom the boy lived in Detroit, visited the boy's parents in Brighton, bringing his clothing that had been left with her. In ten days after her arrival, two children in the family were taken with a malignant form of diphtheria, one dying August 23, and the other when last heard from, being in great danger.

From the statement of the case there can be little question that the boy died in Detroit of diphtheria. The father says that if his children in Brighton have diphtheria, then his boy in Detroit had diphtheria, because, he says, "it is the same thing." The members of the family in Detroit have since had sore throats.

There seems to be little excuse for the attending physician in Detroit, even on the supposition that he did not recognize the disease as diphtheria; for common sense dictates, and the State Board of Health has long taught, that in cases of sore throat the same precautions should be taken as in undoubted cases. If the attending physician did recognize the disease as diphtheria, and then failed to report it to the health officer, and certified that it was "heart clot," he is even more guilty. If he had reported the case to the health officer of Detroit as diphtheria, or as sore throat which might be diphtheria, as he ought to have done, probably the body, clothes, room, etc., would have been disinfected, and the lives in Brighton and elsewhere would not have been endangered.

PRACTICAL RESULTS IN RESTRICTING DIPHTHERIA.

(Meeting of State Medical Society, Lansing, May 13, 1887).

Bearing on the communicability of diphtheria and the practicability of its restriction, Dr. Baker presented a table and a diagram based on a compilation of reports by local health officers in Michigan for the year 1886. They exhibit the results of isolation and disinfection in outbreaks of diphtheria.

In the one hundred and two outbreaks where isolation or disinfection or both were neglected, the average *cases* per outbreak were a little over sixteen, and the average *deaths* were 3.23; while in the one hundred and sixteen outbreaks in which isolation and disinfection were both enforced, the average *cases* per outbreak were 2.86 and the average *deaths* were .66; indicating a saving of over thirteen cases, and 2.57 deaths per outbreak, or one thousand five hundred and forty-five cases and two hundred and ninety-eight deaths during the year, by isolation and disinfection in the one hundred and sixteen outbreaks, compared with those in which nothing was done.

TABLE.—Diphtheria in Michigan in 1886: exhibiting the average number of cases and deaths per outbreak: (1) in all the four hundred and sixty-one outbreaks reported, (2) in the two hundred and forty-three outbreaks in which it is doubtful whether or not disinfection and isolation were secured, (3) in the one hundred and two outbreaks in which isolation or disinfection or both were neglected, and (4) in the one hundred and sixteen outbreaks in which isolation and disinfection were both enforced. Compiled in the office of the secretary of the State Board of Health, from reports made by local health officers.

	(1) All outbreaks.* (461 outbreaks.)		(2) Isolation or Disinfection not mentioned or the Statements doubtful.† (243 outbreaks).		(3) Isolation or Disinfection or both Neglected. (102 outbreaks).		(4) Isolation and Disinfection both enforced. (116 outbreaks).	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Totals..............	3,085	656	1,103	250	1,650	329	332	77
Averages.........	6.69	1.42	4.54	1.03	16.18	3.23	2.86	.66

*These do not include the cases in Detroit and Grand Rapids.

† It is possible that in giving the public the benefit of the doubt, cases are sometimes reported diphtheria which ultimately prove otherwise. Many of these being limited to one or two cases may bring the averages in these columns concerning which least is known below what they really should be. All cases and deaths concerning which positive statements were made by health officers are included in the columns marked (3) and (4).

IN ALL CASES OF SORE THROAT, PRECAUTIONS SHOULD BE TAKEN.

Resolutions adopted by the Michigan State Board of Health, January 10, 1882:

WHEREAS, It is often difficult to recognize mild cases of diphtheria, or to distinguish such cases from a simple pharyngitis, or laryngitis, and

WHEREAS, Such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria;

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case to give to the public safety the benefit of the doubt;

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

Attest: HENRY B. BAKER, Secretary.

THE CLINIC QUESTION.

To the President and Board of Regents of Michigan University:

DEAR SIRS—The question of the establishment of a clinic in Detroit in connection with the medical department of the State University has been for many months a question of deep interest to me. I think the present time marks a crisis in the history of the department. Medical schools, the country over, are advancing by means of a closer alliance between theoretical and practical teaching, and students are more and more choosing those institutions in which clinical teaching is given a prominent place. Indeed the latter fact explains the former; students are demanding better opportunities and the schools are providing them. To establish the clinic in Detroit in accordance with a well matured plan, a plan which should as far as possible harmonize schools already existing, which should include higher requirements for graduation, would in my judgment ensure for the medical department a prosperous and useful future and place it upon so substantial a basis that it would have few rivals and no superiors as a centre of medical education in this country.

That an abundance of material for every line of work would be provided; that scientific investigation on the part of professor and instructor as well as student would be quickened, and as a result additions to medical knowledge follow; that to give the earlier part of a course to elementary work at Ann Arbor and the latter part to clinical work at Detroit would make an advantageous division of time for the student,—all these are good reasons for making the change under consideration. However, it is not so much my object to recite reasons for the change as to inform you that a careful consideration of the question has led me to heartily favor the establishment of the clinic in Detroit, and to express to you my hope that all the influence you can exert will be directed to effecting such a result.

Very truly, E. S. SHERRILL, M. D.

DETROIT, August 25, 1887.

THE ATTORNEY GENERAL'S DECISION THAT WHOOPING-COUGH SHOULD BE REPORTED A CONTAGIOUS DISEASE.

GRAND RAPIDS, MICHIGAN, August 16, 1887.

Dr. Henry B. Baker, Clerk of Michigan State Board of Health, Lansing, Michigan:

DEAR SIR—Your letter of August 1st instant was received during my absence.

You call my attention to *Sections 1675 and 1676 of Howell's Statutes* requiring physicians to report cases of small-pox, diphtheria, scarlet fever and any "*other disease* dangerous to the public health," and ask whether whooping-cough is included in this provision.

These sections were amended by act number 11 of the *laws of 1883*, the reading of which in this particular was not changed.

You state that the question has arisen whether whooping-cough is included in this provision. This would seem to be a question for a medical practitioner rather than a lawyer.

There can be no question that any disease which is liable to produce death is one dangerous to the public health. You call my attention to the report of Dr. William Squires, of the London Epidemiological Society, who says of whooping-cough, "it is one of three diseasas most fatal to young infants." * * * "Whooping-cough comes next to scarlet fever in the number of deaths attributed to it in this country" (England).

You also call my attention to the fact that the reports to the office of the Secretary of State of Michigan for the ten years ending with 1882 show the average deaths from small-pox each year to be fifty-three and from whooping-cough one hundred and fifty-six, about three times as many as from small-pox.

From these statements and references as well as from that which is common knowledge to everybody that whooping-cough is often the cause of death among infants there would seem to be no question but that it is included in the language of the act referred to, and that it is made the duty of physicians attending cases of whooping-cough to report the same to the health officer or clerk of the board of health as the law provides.

Very respectfully,

Moses Taggart, Attorney General.

EDITORIAL PERISCOPE.

THE INTERNATIONAL CONGRESS.

The Ninth International Congress is now a thing of history. The few who labored so earnestly for its success are now unbending; their great burden is removed; the tention is taken off. The pendulum swings back, some rejoice that the affair is over, and consider the Congress a great success; others suffering from reaction, see their hopes unrealized, and regard it a failure. The Congress did not fail because it transpired, but it was not a success because it fell below the standard set for it. With the great dissatisfaction that was created when the preliminary organization was made, which never abated but eventually grew into a powerful opposition, the possible success of the Congress was not possible. The committees, and those who appreciated the great difficulties attending their work under the existing unfavorable circumstances, cannot think otherwise than that the Ninth International Medical Congress was a success. Those, however, who had no part in the work, and who could not understand why there should be any discord or obstruction attending so great and grand an enterprise, feel that the Congress was not a success, and narrowly missed being a failure. The majority of the foreign delegates occupied the latter position, and such left Washington disappointed, and not a few openly expressed themselve to that effect. The representation of the profession in America showed that the average American physician wanted the Congress to be a complete success. No possible fault can be found with the number of American delegates present, nor with the number and variety of papers presented, nor the readiness with which these delegates entered into the discussion of papers. But, adverse criticism was justly made with the quality of many of the papers, and with the utter want of merit in much of the discussion.

The presidents of the various sections had the authority and it was their duty to reject inferior papers unsparingly. Judging from their contents, too many papers were prepared, not with the motive of presenting any thought or even suggestion that would be a credit to the author or a benefit to the profession, but with the vain desire to be credited at home with having written a paper for the International Medical Congress. The neglect to intercept such papers will be quite apparent, when the printed proceedings of the Congress are issued.

The work of the various committees was highly commendable, and when it is considered that the work of a committee usually falls upon the shoulders of a single individual, the chairmen of these committees deserve every praise. The executive part of the Congress was a success, and those who from real or imaginary offense remained away, or went so far as to use their influence to defeat the grand undertaking and disgrace the American profession, must now, during the cooling down process, feel the discomfort of chagrin and disappointment.

DIPHTHERIA IN MICHIGAN.

The kind of work that is constantly being done by the Michigan State Board of Health is highly commendatory, and it should receive the earnest and cheerful support of every physician in the State. In this number, we publish, under the department of General Correspondence, some valuable information and instruction pertaining to the spread of diphtheria, and the precautions that should be taken against it. The recent error(?) in diagnosis and certificate of death, to which attention is there called, shows the result of carelessness or dishonesty, and the principal of the school and the health officer of the village of Brighton deserve the gratitude of the community in preventing a possible serious epidemic of the disease. The practical results in restricting diphtheria, as shown in the table compiled by Dr. Baker from reports by local health officers in Michigan for the year 1886, are very positive. In outbreaks where isolation or disinfection or both were neglected, compared with outbreaks where these precautions were enforced, the ratio of average cases is six to one, and of average deaths ten to one; that is, the ratio of the whole number of deaths is sixty to one. With this appalling difference, any neglect to faithfully carry out the most strict precautions in every case of evident or suspected diphtheria cannot be considered in any other light than manslaughter.

CONDENSATIONS.

EARLY VACCINATION.—Bresnier states that children vaccinated at birth, and subsequently revaccinated, exhibit an increasing vaccinal receptivity from seven to twenty years of age.

THE *Medical Record* states that the use of gaseous enemata in phthisis has been entirely abandoned in the fourth division Bellevue Hospital, where they have been earliest and longest tried.

A WARM WATER ENEMA, containing thirty grains each of chloral hydrate and bromide of potassium is recommended by Dr. Meniere, of Paris, for the relief of violent pains that in some women precede the menstrual flow.

SUCCESSFUL TREATMENT IN SEVERE HYSTERIA.—The efficacy of massage, isolation, and overfeeding in severe hysteria is shown by Dr. W. Hale White (*British Medical Journal*) in a clinical lecture on a case, where unsuccessful attempts had been made to treat her at home, and in the general ward of a hospital.

THE "DRY TREATMENT" OF UTERINE DISEASES.—A series of articles advocating the "dry treatment" of uterine and periuterine diseases, by Dr. Engleman, of Saint Louis, have recently appeared in the *American Journal of Obstetrics.* Dr. Engleman recommends the insufflations of bismuth or iodoform and the use of dry non-absorbent cotton tampons. He considers the glycerine and absorbent cotton tampon a useless, dirty treatment.

THE "COUNTRY DOCTOR."—A contemporary has this to say for him: "Country physicians save more money each year, on an average, than city doctors. Their minds are free, their consciences easy, and their pocket-books flush, even if they cannot put on style; and hold prominent college and government positions."

DEATH OF GERMAN MEDICAL PHILOSOPHERS.—Two more learned medical men have recently died in Berlin, whose names are not unknown in this country: Wilhelm Hack, whose theory of the erectile tissue upon the turbinated bones created much interest some years ago; the pathologist, Carl Fréidlander, whose name is connected with many valuable discoveries, the other.

GAS ENEMATA IN PHTHISIS.—Private letters from Philadelphia to the *Southern California Practitioner* inform the editors that this treatment has been thoroughly tried there, and with not very encouraging results. For a time there may be a slight decrease in fever and in the quantity of the expectoration, but the improvement is not permanent. No change in the physical signs are noted.

POTENCY OF PROLONGED SLEEP.—Dr. Corning gives the essential features of a scheme of brain rest, as: (1) Progressively prolonged sleep; (2) Increased general and cerebral nutrition; (3) Diminution of physical irritation; (4) Elimination of sensory impressions, particularly those of sound. By seclusion in a darkened room, eventually for from ten to fifteen hours at a time, the amount of sleep is progressively increased by habit, moderate medication and hydrotherapy.

THE GAS TREATMENT.—An exchange gives the following question and opinion: "Doctor, what do you think of this new treatment of consumption by injecting carbonic acid into the rectum?" "Well, it certainly distracts the mind of the patient for a while, and may do good by its moral effect of making him think of his latter end; he becomes as it were, conscious of his rectum, as the schoolboy rendered *mens conscia recti.* He may even 'bacille' enough to cherish the hope that he is taking a short cut to health over this *pons asinorum,* but I regret to say that I think he will find that the road will end as it began, in gas."

PERIODICAL INEBRIETY.—Dr. Crothers reports a case in which the periods recur every ninety-one days. Every ninety-one days, no matter where he is or what he may be doing (he is now a travelling temperance lecturer), a strange nervous trembling comes over him, which is followed by a great thirst for water, and finally for spirit. If he can get spirits or bromide of sodium, and become stupid for a few hours, this feeling will wear away, followed by high fever and great prostration, and in a week or so he is able to go to work again.

SHORT CUT INTO MEDICINE.—Somewhere in the East they evidently have an incubator that sends out M. D.'s before time. In the *Boston Medical and Surgical Journal* a correspondent from Brooklyn writes that he is reminded by seeing a communication in that journal headed, "An M. D. in Nine Months," of a similar instance. The first course of lectures was taken in Ann Arbor, and, the whole course was less than a year. The first course occupied nine months of this "less than a year," showing that the incubator is capable of doing rapid work.

ENCYCLOPÆDIA OF OBSTETRICS AND GYNECOLOGY.—In order to ensure the completion of this work in the early autumn, it is found convenient by the publishers, William Wood & Company, to issue the volumes as rapidly as they come from the hands of the translators and editor, without regard to their consecutive numbers. Volumes one, two, three, four, six, nine and ten are now out. Volumes eight, eleven, twelve, and five will be issued in September and October. Volume fifteen, completing the work, will probably be the last one issued, in consequence of about half the volume being entirely original by the author.

FŒTUS RETAINED FOR THIRTY YEARS.—The report of a case of extra uterine pregnancy, the fœtus being retained for thirty years and becoming a lithopædion, was read by Dr. Fales before the section of Obstetrics and Gynæcology of the Suffolk District Medical Society. The various dates and events of this case are epitomized as follows: Mrs. A., was married in 1844; first child four years later; second pregnancy eight years later; probable rupture of the tube and subsequent attack of peritonitis at third month; death of fœtus at ninth month; death of Mrs. A. from cancer of larynx thirty years later, the fœtus having become converted into a lithopædion.

A DRUG WHICH CURES GASTRALGIA.—One twenty-fourth of a grain of arsenious acid, made into a pill with two grains of extract of gentian, thrice daily, between meals, upon the statement of Dr. Sir James Sawyer (*Lancet*), is a remedy that will cure gastralgia. Prominent pathological concomitants or casual antecedents of the disorder, must be dealt with and appropriately met. The use of the remedy must be continued for a few weeks. In the severest cases counter-irritation to the epigastrium or vesication, are useful, and every hygienic adjuvant is of value to raise the strength of the patient. The diet should be generous.

THE DUODENUM: A SYPHON TRAP.—Attention is called to the fact by Dr. Collier, in the *Lancet*, that gases generated in the jejunum, ileum, and large intestines never pass upwards, not even during vomiting, due to hernia, etc., and gives as an explanation to this apparent breach of the law of gravity, the trap arrangement of the duodenum. He points out the following conditions in support of his view: The absolute constancy of the curve of the duodenum, the complete fixation of the terminal or second ascending portion, the position of the pancreas and liver,—as component parts of a syphon trap, whereby gases generated below the duodenum are prevented from passing upwards.

ANTIPYRINE A SUBSTITUTE FOR MORPHIA.—Professor Germain Sée has made several communications to the Academy of Sciences on the treatment of pain by antipyrine. The Paris correspondent to the *Lancet* states that he now advises that the drug be administered by hypodermic injection in doses of half a gramme in the same quantity of water. The injection is followed by a disagreeable feeling of tension, which lasts a few seconds; and, when this passes off, the pain, whatever may be its cause, at once remits. It has the great advantage over morphine in giving rise neither to vertigo nor vomiting; nor does it produce either the somnolence or the artificial stimulus which lead to morphinomania. The great point claimed by Professor Sée is, that to its sedative effect it adds a curative action, which morphia does not possess. The diseases where it is more especially recommended are numerous—acute rheumatism, acute gout, herpes zoster, lumbago, ataxia, hepatic and nephritic colic, angina pectoris, and acute asthma. "But there is no morbid condition in which it does not advantageously replace morphia; and as we gather experience we shall see antipyrine used in its stead, and so become the preservative against chronic morphia poisoning."

MESMERISM A TEMPERANCE AGENT.—One of the phenomena which characterize that curious condition known as "hypnotism" is the passive obedience yielded by the subject of experiment to the commands, or rather suggestions, of the operator. It is sufficient for the latter to "suggest" that the person under its influence can or cannot do a certain thing, to confer or withdraw the power. One of the latest applications of this occult power exercised by the mesmerizer over his victims is reported by the *British Medical Journal*, to come from Soissons in France, where a local drunkard was inhibited from indulgence in his customary beverages. Possibly the temperance cause may find in hypnotism a valuable ally.

SELECTION AND ADMINISTRATION OF ANÆSTHETICS.—In a paper on "A Few Practical Points in the Selection and Administration of Anæsthetics" published in *Annals of Surgery*, Dr. Hewitt, of London, states: That ether preceded by nitrous oxide is the best anæsthetic for the bulk of cases in general surgery; that vomiting during the administration of an anæsthetic is usually prevented by rapidly and thoroughly anæsthizing the patient, the diet having been previously regulated; that it is questionable whether any anæsthetic should be given to patients suffering from obstructive dyspnœa; that the sedative effects which opium or morphine exerts upon the respiratory system should certainly contra-indicate their employment in cases in which respiratory embarrassment or failure would be likely to occur.

THE TREATMENT OF "COLDS."—Dr. Whelan writes in the *Practitioner* that the usual "coddling treatment of colds, except in the very old, very young, or very delicate, is a mistake." Persons suffering from catarrh should be warmly clothed and avoid draughts. "Feed a cold and starve a fever," is advice that is nearly half correct. Catarrhal patients should take an abundance of light nutritious food, and some light wine, but avoid spirits, and above all tobacco. All depressants should be avoided. Morphine, antimony, aconite, render liable relapses and renewals. Dr. Whalen found large doses of an opiate unpleasant and of little use. Belladonna, quinine and arsenic he has found useful when given separately and in small doses. When combined he believes them to be nearly specific-prophylactically and therapeutically.

IRON A VALUABLE ADJUVANT IN DYSPEPSIA.—M. Blondel publishes a note on this subject. As it is admitted that dyspepsia produces anæmia, it seems natural that iron should be added to the various medicinal substances employed in the treatment of indigestion. The great difficulty of absorbing this drug, is overcome, M. Blondel thinks, by the employment of albuminate of iron. Being combined with a proteid substance, the iron is, so to speak, already partly digested, and its absorption, therefore becomes easy. This combination of iron and albumen seems well suited to correct the alteration of the blood, which is characterized by a decrease in the quantity of its albumen. M. Blondel administers the albuminate of iron mixed with the syrup of orange. Dose: A tablespoonful (five centigrammes of the metal in a state to be assimilated) after meals.

A NOVEL DEPARTURE IN ADVERTISING.—Believing that the advertising of medicinal preparations often fails of its purpose, namely, to clearly and intelligently present to physicians their special advantages, pharmacal or therapeutic, on account of the fragmentary and imperfect manner in which the facts are usually conveyed in such advertisements, Parke, Davis & Company propose to inaugurate rather a novel departure in advertising. It is their intention to publish in the advertising pages they occupy in medical journals a series of what they term plain talks to physicians, in each issue taking up a certain class of preparations and pointing out the reasons why they deserve to be prescribed, until all their preparations shall have thus been presented. The excellence of the products of this house are well known, and it is to be presumed that their long experience in the manufacture of medicines will enable them to say in these informal talks something of real interest and benefit to their medical friends.

NEW PUBLICATIONS.

MANUAL OF OPERATIVE SURGERY. By Joseph D. Bryant, M. D., Professor of Anatomy and Clinical Surgery, and Associate Professor of Orthopedic Surgery, Bellevue Hospital College; Visiting Surgeon to Bellevue Hospital; Consulting Surgeon to the Bureau of Medical and Surgical Relief, of Bellevue Hospital; Consulting Surgeon to the New York Lunatic Asylum, and to the Northwestern Dispensary. With about 800 Illustrations. 8mo: 530 pages. Cloth. New York: D. Appleton & Co., 1887.

Dr. Bryant did not prepare this manual of operative surgery "to fill a much needed want." "The principal incentive to my action," the author says, was "the frequent request on the part of those whom it has been my pleasure to instruct in operative surgery during the past few years to make a book based somewhat on the plan I have employed in teaching this subject." In the fulfillment of this plan, Dr. Bryant has produced a work on operative surgery that is complete but not so comprehensive as to be exhaustive. It is closely restricted to description of operations. The subjects of dislocations and fractures are not considered; neither are the operations peculiar to the female sex, and the eye and ear.

The first three chapters cover respectively: General Considerations, Agents for Controlling Hæmorrhage; Treatment of Operation-Wounds. M. Molliere's method of etherization by the rectum is briefly noticed under the subject of anæsthetics. The author does not consider it equal to the other method, except, perhaps, for operations about the face, or where ether is contra-indicated on account of the irritation it causes the mucous membrane of the respiratory apparatus, especially if they be diseased.

Chapters IV and V, consider the operations upon the blood-vessels. The ligation of arteries is most satisfactorily treated. The linear, muscular and contiguous anatomical guides are minutely detailed and illustrated with numerous plates. Operations on veins embrace those for vericose veins, hæmorrhoids, varicocele, transfusion and nævus.

In Chapter VI, devoted to description of operations on the nervous system, in connection with trephining the cranium, the subject of cerebral localization receives only cursory mention. As cerebral surgery has made such rapid advancements through the recent studies of cerebral localization, it seems to us that it would have been very appropriate if the subject had received a more extended notice. The modern procedure of suturing of nerves is described and recommeded in cases of recent injury.

In the following chapter tendon suturing is considered an accomplished fact. The author states that "Hereafter the practical surgeon, instead of assigning as a reason for the permanent immobility of an extremity, that 'The tendon was cut,' should first make an earnest effort to unite its extremities."

The subjects given in Chapters VIII, IX and X, pertain to operations upon bones, chiefly those of excisions, resections, osteotomy (for the relief of deformities) and amputations. On the operation of excision of the knee-joint, the author says: "This joint can be excised with comparative safety to the patient, and with a fair prospect of recovery with a useful limb."

The field of plastic surgery is carefully gone over. The operations are minutely described and abundantly illustrated. Operations on hollow viscera in contact with serous surfaces forms an important chapter in the work. All the various and recent operations and methods of suturing receive full attention. Operations on the anus, rectum, bladder, penis and scrotum, and many miscellaneous operations not classified are given.

The work is a valuable one, and in all operations can be followed with safety. In operations of doubtful propriety, the author is conservative, but in the mention of recent operations the author is up with the present time.

ANALYSIS OF THE URINE. With special reference to the Diseases of the Genito-Urinary Organs. By K. B. Hofmann, Professor in the University of Gratz, and R. Ultzmann, Docent in the University of Vienna. Translated by T. Barton Brune, A. M., M. D., Late Professor of the Practice of Medicice in the Baltimore Polyclinic and Post-Graduate Medical School, and Lecturer on Clinical Medicine in the University of Maryland, and H. Holbrook Curtis, Ph. B., M. D., Fellow of the New York Academy of Medicine, Member of the County Society, etc. Second edition, revised and enlarged. 8mo: three hundred and ten pages. Cloth, $2.00. New York: D. Appleton & Company, 1886.

The first edition of the translation of Hofmann and Ultzmann's work on the analysis of the urine enjoyed a deserved popularity with the profession of this country, and became standard authority. But the advance made during the last few years in the examination of urine, and the exhaustion of the first edition have made a second and revised edition necessary. In the present edition the translators have embodied the advances that have been made since their first work appeared. These additions and changes, contributed by the translators, have been so liberal that the present is virtually an American edition. In the chapters on albumen and sugar the valuable character of their work is particularly noticeable.

The clearness of statements, and the simplicity of language make the work desirable to those who are self-taught on the subject. That part of the book which pertains to the diagnosis of the diseases of the urinary apparatus is most valuable.

To aid in the microscopic work of urinalysis there appears in the appendex of the work sixteen well-engraved and finely shaded and colored cuts of solid normal and pathological constituents of the urine.

DISEASES OF WOMEN. A Hand-book for Physicians and Students. By Dr. F. Winckel, Professor of Gynæcology, and Director of the Royal University Clinic for Women in Munich. Authorized Translation, by J. H. Williamson, M. D., Resident Physician Allegheny General Hospital, Allegheny, Pennsylvania. Under the Supervision and with an Introduction by Theophilus Parvin, M. D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. One hundred and thirty illustrations. Six hundred and seventy-four pages. Cloth, $3.00; sheep, $3.50. Philadelphia: P. Blakiston, Son & Company, 1887.

The author of this work, Professor Winckel, is recognized in Europe as a most eminent writer, and successful teacher of obstetrics and gynæcology. He has written largely upon these subjects and his articles, from time to time, have been published in American medical journals, so that his name is well and favorably known to the profession of this country. This treatise is a recent work, being first issued in Leipsic about one year ago. It is drawn from a wide personal experience, and thorough knowledge of the studies of others, by one who in his practical duties combines the teaching of obstetrics and the practice of gynæcology. The author does not favor some of the most recent and fascinating gynæcological operations. On the treatment of chronic inflammation of the ovaries he says: "The cases in which castration is indicated for bilateral oöphoritis with ovarian neuralgia are in my judgment of rare occurrence." He considers every castration for the removal of ovaries which are not obviously diseased to be a mistake. After years of careful treatment and observation he has seen such patients recover without an operation, and has "rejoiced with them when they became happy brides." Great importance is given to gynæcological medicine. The eminently conservative teachings of this work must prove valuable checks to the rapidly growing tendency to resort to abdominal section with the removal of the uterine appendages in cases in which a cure might have been effected by continued medical treatment.

Many diseases of the genital organs, not described in the text-books of this country, are given, but one of the special merits of the work is the importance given to pathological anatomy. The illustrations are new, very clear and accurate. Full credit is given by the author to the founders and builders of the American school of gynæcology. In his mention of one, of whom too much admiration cannot be given, he makes the following statement: "We are indebted to the American, Marion Sims, more than to any one else, for a large part of our knowledge of, and progress in, the treatment of diseases of women."

After careful examination of the work we heartily endorse the statement of Professor Parvin made in his introduction to the translation: "No one can read and thoroughly study this volume without deriving not only much important practical information, but also finding his views of gynæcology growing larger, and the superstructure resting upon a broader and firmer foundation."

LITERARY MENTION.

BOOKS.

"On the Pathology and Treatment of Gonorrhœa and Spermatorrhœa." By J. L. Milton, Senior Surgeon to Saint John's Hospital for Diseases of the Skin, London. Octavo: four hundred and eighty-four pages. Illustrated. Price, bound in extra muslin, $4.00. New York: William Wood & Company.

"Sexual Impotence in the Male and Female." By William A. Hammond, M. D., Surgeon-General United States Army (retired list); Professor of Diseases of the Mind and Nervous System, at the New York Post-Graduate Medical School, etc. 8vo: three hundred and five pages. Cloth, $3. Detroit: George S. Davis, 1887.

"Syphilis." By Jonathan Hutchinson, F. R. S., LL. D., Consulting Surgeon to the London Hospital and to the Royal London Ophthalmic Hospital; Vice-President of the Royal College of Surgeons. With eight chromo lithographs. 12mo: five hundred and thirty-seven pages. Cloth, $2.00. Philadelphia: Lea Brothers & Company, 1887.

"A Handbook of General and Operative Gynæcology." Volume I. By Dr. A. Hegar (University of Freiburg) and Dr. R. Kattenbach (University of Giessen). In two volumes. This is also Volume VI of "A Cyclopædia of Obstetrics and Gynæcology" (twelve volumes, price $16.50), issued monthly during 1887. New York: William Wood & Company.

"A System of Gynæcology." By American Authors. Edited by Matthew D. Mann, A. M., M. D., Professor of Obstetrics and Gynæcology in the Medical Department of the University of Buffalo, New York. Volume I. Illustrated with three colored plates and two hundred and one engravings on wood. 8vo: seven hundred and eighty-nine pages. Sheep, per volume, $5.00. Philadelphia: Lea Brothers & Company, 1887.

"Diseases of the Female Urethra and Bladder." By F. Winckel, M. D., of the Royal University, Munich; and, "Diseases of the Vagina," by A. Breisky, M. D., of the Royal University, Vienna. Edited by Egbert H. Grandin, M. D., of New York. These two treatises constitute Volume X of "A Cyclopædia of Obstetrics and Gynæcology" (twelve volumes, price $16.50), issued monthly during 1887. New York: William Wood & Company.

PAMPHLETS.

"Names and Addresses of Health Officers in Michigan," for the year 1887 and 1888.

"Abstract of the Proceedings of the Michigan State Board of Health." Regular meeting at Lansing, July 12, 1887.

"An Analysis of One Hundred Cases of Labor." By A. W. Nicholson, M. D. Reprinted from *Detroit Lancet*, August, 1884.

"Intubation of the Larynx." By E. Fletcher Ingals, M. D., Chicago. Reprinted from the *New York Medical Journal*, for July 2 and 9, 1887.

"Practical Thoughts for Physicians." Address delivered before Indiana State Medical Society, May 10, 1887. By G. W. H. Kemper, M. D., Muncie, Indiana.

"Antiseptic Surgery for the Country Physician." By F. J. Groner, M. D., Surgeon to Mercy Hospital, Big Rapids. Reprinted from Transactions of the State Medical Society, 1887.

"Transactions of the Michigan State Medical Society." Twenty-second annual meeting, held at the Capitol Building, Lansing, May 12 and 13, 1887. George Duffield, M. D., Secretary, Detroit. Detroit, Michigan: D. O. Haynes & Company, 1887.

"The Technique of Tracheotomy and Intubation of the Larynx." By Charles Godwin Jennings, M. D., Professor of

Chemistry and of Diseases of Children, Detroit College of Medicine, etc. Reprinted from Transactions of the State Medical Society, 1887.

"Renal Colic, Parasitic and Calculus: A Criticism." By J. B. Marvin, M. D., Professor of Theory and Practice of Medicine and Clinical Medicine in the Kentucky School of Medicine. Reprinted from *South-Western Medical Gazette*, June, 1887. Louisville: Breadley & Gilbert Company, 1887.

"A Review of the Most Important Advances in Surgery, Medicine and Pharmacy in the Last Forty Years." By C. W. Moore, M. D., San Francisco. Reprinted from the *Pacific Record of Medicine and Surgery*, July 15, 1887. San Francisco, California: Pacific Record of Medicine and Surgery.

"On the Existence of 'Dermatitis Herpetiformis' (of Duhring) as a Distinct Disease." By L. Duncan Buckley, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc. Reprinted from *Journal of Cutaneous and Venereal Diseases*, Volume IV, April, 1886. New York: Wm. Wood & Company, Publishers, 56 and 58 Lafayette Place, 1886.

"Address in State Medicine: Recent Advances in Preventive Medicine." By George H. Rohe, M. D., of Baltimore, Maryland. Delivered before the Section on State Medicine, at the Thirty-eighth Annual Meeting of the American Medical Association, held at Chicago, June 7 and 10, 1887. Reprinted from the *Journal of the American Medical Association*, July 2, 1886. Chicago: 1887.

"Report of Proceedings of the Illinois State Board of Health." Quarterly meeting, Chicago, July 8, 1887. Synopsis of the Work Accomplished under the Act to Regulate the Practice of Medicine, for the past ten years. Comparative Exhibit of the Reports of Births and Deaths for 1885 and 1886. The act to regulate the Practice of Medicine in the State of Illinois, in force July 1, 1887.

"On the Question of the Proposed Extension of the Clinic of the Medical Department of the University of Michigan to Detroit, and Professor A. B. Palmer's Opposition Thereto." A communication addressed with great respect to the Honorable Board of Regents of the University. By Donald Maclean, M. D., Professor of Surgery and Clinical Surgery in the University of Michigan. Detroit: 1887.

"On Some Important Points in the Treatment of Deep Urethral Stricture." (Read before the Medical Society of the State of New York, February 1, 1887.) By F. N. Otis, M. D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York. Reprinted from the *New York Medical Journal*, for February 1, 1887. New York: D. Appleton & Company, 1887.

"Importance and Value of Experimental Research." Doctorate address delivered at the Graduating Exercises of the College of Physicians and Surgeons, Chicago, Illinois, February 21, 1887. By N. Senn, M. D., Milwaukee, Wisconsin, Professor of Principles and Practice of Surgery and Clinical Surgery. Reprinted from the *Western Medical Reporter*, March, 1887. Chicago: C. F. Ansell Company.

MEDICAL DIGEST.

ON PUNCTURE OF THE ABDOMEN FOR EXTREME FLATULENT DISTENSION IN PUERPERAL CASES.

Priestly reports (*Lancet*, April 9, 1887) the following case occurring in the practice of Surgeon-Major Franklin in India. The patient went out to be married in India two or three years ago, and her first labor began on April 8, 1886. The presentation was natural, but after a long and tedious labor, resulting from inefficient pains, the case had to be terminated by forceps under an anæsthetic, and the perineum was ruptured. Sutures were put in the perineum, and all went well until two days later, when the patient became hysterical, and began to suffer from nausea and vomiting; at the same time the abdomen became much distended. Hypodermic injections of morphia, with the application of turpentine to the abdomen, checked the sickness, and allowed milk and lime-water to be taken for a time. Next day the abdominal distension had enormously increased, there was constant vomiting, some dyspnœa, occasional rigors, and signs of exhaustion.

The extreme abdominal distension threatened the life of his patient. He had tried all the usual remedies without effect, and so was obliged to act for himself. After consultation with a colleague, Dr. Harris, he punctured the ascending colon with a small trocar. The gas escaped with considerable force, making a whistling noise as it passed through the small cannula. With the aid of pressure the greater part of it was expelled and a binder adjusted. Immediate relief was afforded, the vomiting ceased, and only slight nausea remained. She had a good night, and the next morning the temperature was normal. This first puncture was made about seventy-two hours after the birth of the child. Forty-eight hours later it was necessary to puncture the colon again, and this was followed, as after the first operation, by immediate relief to all the distressing symptoms. The second operation was followed by the giving of calomel, in doses of one-twelfth of a grain, every half hour, and continued for about sixty hours, until the bowels acted freely. The tempera-rose to 102° after the second puncture, and for ten days the case continued to cause some anxiety, owing to nausea and want of sleep. After this the improvement was steady, and the patient eventually got quite well. There is no record of the temperature during the access of the illness, and nothing is said of pain or subsequent inconvenience from the abdominal punctures.

Commenting on this case, Priestly adds:

"The practice of tapping the abdomen for dangerous retention of flatus is a well-known remedy in some of the ailments of domestic animals, and more particularly the operation is said to be often practised on sheep when they have 'blown themselves,' as it is called, by having eaten too largely of a very succulent pasture, or of some herbage which is improper for them. There are various records of cases where the intestine has been punctured in the human subject for extreme distension in connection with obstruction of the bowels or hernia. For example, Wagstaffe mentions a case in the *British Medical Journal* for 1887, and Broadbent another in the same journal for 1879. Further references are to be found in "Neale's Digest"; and Mr. Bryant, in the *Medical Times and Gazette* for 1872, details a case of hernia, with intestinal distension, where punctures were made in the bowel without bad result; there was no escape of the bowel contents, and only a drop of blood. That the proceeding is ordinarily innocuous enough is proved by the fact communicated to me by Dr. Broadbent, that in one patient the bowel was tapped for flatus somewhere about twenty-eight times, without bad result. Professor Foussagrives, in the *Gazette Hebdomaduire* for 1877, says that he has seen intestinal puncture practised by Nélaton, Blache, and Velpeau, and that 'it is a sovereign operation in some cases, and not dangerous even where there are multiple punctures.' Surgeon-Major Franklin says, in one of his letters to me, that he had some recollection of a suggestion made by Dr. Braxton Hicks concerning tapping a flatulent abdomen in puerperal cases, and Dr. Hicks tells me that, though he had suggested it as applicable under certain circumstances, he has not himself employed it. I may remark that in some forms of illness after delivery there is no doubt grave danger arising from extreme abdominal tympanites. It is even probable that with the decline of other untoward symptoms the mere continued pressure of the distended intestines may so keep up irritation of the stomach and depress the heart's action as to become itself a source of peril. In these cases puncturing the intestine where it is most distended may afford notable relief, and experience seems to teach that it may be practised with impunity."

Dr. Robert Barnes writes (*Lancet*, April 16, 1887):

"I am sure Surgeon-Major Franklin and Dr. Priestly will be gratified to learn that this treatment is fully discussed in the 'System of Obstetric Medicine and Surgery' (Volume II, 1885, page 500) of myself and Dr. Fancourt Barnes in the following terms: 'The treatment of tympanites is partly operative. The distress and danger attending tympanites are due in some measure to the great pressure from distension. This impedes respiration, circulation, and other functions. If the tension could be reduced, corresponding relief might be expected. Braxton Hicks advocated abdominal puncture with this intention (Obstetrical Transactions, 1868–69), and related cases in illustration. A small exploring trocar is the best instrument. By it the intestine is pierced in three or four of the most prominent points. As Hicks says: 'The pressure of the gas upon the sympathetic ganglia and nerves, and the tension of the tissues which they supply, add much to the collapse and vomiting. The least that can be claimed for the operation is that the last moments of the patient can be rendered comparatively free from suffering.' *We have adopted the plan, and can speak favorably of it.* It must never be forgotten that tympanites is not necessarily a fatal symptom; and it may well be that relieving this symptom may conduce to a recovery.'"

Dr. Stephen Nesfield contributes (*Lancet*, April 30, 1887) the following case:

"Mrs. W. (seen November 6, 1875) was confined to bed in the seventh month of pregnancy, with vomiting, dropsy, and albuminous urine (nearly one-half on testing). On October 5 she was prematurely confined; labor natural. Vomiting persisted after confinement, and a severe febrile state followed, with flatulent distension of the abdomen as a chief symptom. This increased during the next few days, and on the night of the 12th, the distress being so great, I punctured the bowel (Mr.

E. Jackson being with me) with a fine trocar. Flatus and some yellow fluid escaped. Relief was given, and the patient, after some weeks of illness, recovered, the albumen entirely disappearing. No inconvenience of any kind followed the operation, and the patient has enjoyed good health since. The distension returned after the operation, but was not so extreme, and the puncturing was not repeated."

To the above Dr. Amidon adds, in the *Analectic*, that he has repeatedly relieved the tympanites of peritonitis by the introduction of an aspirator needle, with only the most beneficial results.

INSTANTANEOUS CURE OF WHOOPING-COUGH.

Dr. Mohn writes to the *Revue des Sciences Médicales*, that some six months ago, one of his children was attacked with scarlatina and whooping-cough, the latter making its appearance eight days after the appearance of the scarlatinal rash. The scarlatina was light, the child, aged three years, keeping the bed only three or four days. The whooping-cough also presented no grave features, but hung on for several weeks. Six weeks after the onset of scarlatina, the child still "whooping" strongly, it was determined to disinfect the house thoroughly, and sulphurous acid gas was chosen as the agent of disinfection. The result was a complete surprise to the doctor. From the moment of disinfection of the apartments the whooping-cough ceased, not only in the child in whom it had become chronic, but in two others then in the acute stage of the disease. The result was imparted to a number of practitioners, friends of Dr. Rosenbach, all of whom tried the plan with success. The procedure is as follows: The affected children (or others) are, in the morning, bathed thoroughly and clothed in clean fresh garments throughout, leaving nothing upon their persons which they had hitherto worn. In the bed room, nursery, and living rooms frequented by the children, the clothing, bedding, etc., which they had been using, are suspended so that the gas will have a free circulation through and about them. A half ounce or six drachms of sulphur, broken up into small bits, is then burned in each apartment, the burning being maintained for four or five hours. After this, the air is let in and made to circulate freely through the rooms by waving the doors backward and forward. The sheets and blankets, etc., must be well aired by hanging outside in the wind. It is said that in no single instance where this plan has been followed has it failed to cause whooping-couph to cease immediately. [It is certainly worth trying. I would, however, suggest a better plan of generating sulphurous acid gas, namely: the one communicated by myself several years ago to the sanitary authorities of Memphis, Tennessee. It consists of burning in an ordinary coal oil or alcohol lamp, bisulphide of carbon, either alone or mingled with coal oil. The advantage of this plan is that the generation of gas can be managed to a nicety, since the products of combustion are carbonic and sulphurous acids in the relative proportions of two of the latter to one of the former. One pound of bisulphide of carbon will completely disinfect thirty-seven thousand cubic feet of air—or in other words, it will render that much air deadly toxic to all living creatures.—*Saint Louis Medical and Surgical Journal*].

HEADACHE.

Headache is not a disease; but a symptom; but a symptom of so many diseases that we ought to be on our guard when it manifests itself with exceeding severity and persistence. In the latter instance the eyes should be examined for the possible existence of a choked disc. All infectious diseases are ushered in by headache, and we are aware of the atrocious headache of cerebro-spinal meningitis, small-pox, and malaria. Headache is also a cardinal manifestation of uræmia. The headache—the essential headache—is that with no discoverable lesion, no intoxication of the blood, no discoverable chemical, no biological cause. This brings us to migraine. The majority of these cases occur in individuals otherwise perfectly well. It is a pure neurosis, allied to epilepsy, hysteria, or more markedly to neuralgia. There is an underlying condition due to heredity, and an explosion due to some exciting cause, an emotional disturbance, an indigestion, etc. The speaker would divide migraine into the paralytic and spastic forms. In one the face, on one side of it, is flushed, the eye is suffused, the pupil is dilated, and there is mild lateral sweating. In the other the face is pale, the pupil contracted, the skin is dry. Transition forms occur in the same case and in the same attack.

Treatment.—It is not necessary always to build up the body. In the majority of cases the body is already built up. There is no lesion, no anæmia, no chlorosis, no blood-poisoning. The true treatment of this headache at the present time is the treatment of epilepsy and hysteria. We are justified in cutting short an attack of migraine, if it be of long duration; and, as stated, the best remedy here is the bromide, which is only of value in controlling the attack. It is not proper to place the patient upon the bromides for months. This treatment will result in a degradation of the mind. Sixty to one hundred and twenty grain doses continuously for months will produce a dullness of intellect worse than death. There is one remedy of great value in treating the underlying state, and that is atropia. It can be given without harm, and it is easy to remain on this side of the danger line.

Antipyrine, given in five grain doses every fifteen minutes until twenty to thirty grains have been taken, will often abort or shorten an attack. But the two remedies upon which the speaker relies in the prevention of headache, at least in the prolongation of the intervals, are atropia, as stated, and arsenic. —Dr. J. T. Whittaker in *Cincinnati Lancet-Clinic.*

POISONING BY TAINTED FOODS.

In a recent number of the *Sanitarian* Dr. Barnhill has given, under this title, a summary of the observations made in this country relating to ptomaines and poisoning by tainted foods. Since 1853, when the discovery of these toxic substances was first made known, there has been much research and experimentation to determine the origin and chemical and physiological properties of the ptomaines and like poisons. Unfortunately, there has been no lack of practical illustrations of the effects of these substances upon the human economy, the reports showing that nearly three hundred cases of such poisoning have occurred in the United States, and that a considerable number of these resulted fatally. The ptomaines are, as we know, the product of the various forms of decomposition of organic matter, resulting possibly from the action of microörganisms. They are supposed to be the analogues of the vegetable alkaloids, and have properties and physiological actions similar to the latter. The virulency of the poison seems to depend in some cases upon the stage of decomposition, being, of course, more deadly when resulting from the later processes of decay, and capable of producing all the symptoms and results of septic poisoning. The forms and varieties of these alkaloids are legion, but those which are derived from meat, cheese, and milk are best known, and have received the most study, because of their relation to the public health. The many cases of poisoning from canned fruit and vegetables which we have been wont to ascribe to metallic substances are, we are inclined to believe, really due to the action of toxic alkaloids. Stevenson, in a recent paper, has stated that no cases of acute metallic poisoning are known to have occurred in this country from such sources. It will thus be seen that the public are constantly subjected to dangers which are imminent because of their latent and insidious character. In the absence of carefully conducted chemical tests, it is quite impossible to determine whether a given sample of canned meat, vegetables, or fruit is suitable for consumption, or whether milk and the various forms or products of this substance can be eaten with impunity. Measures for our protection must, therefore, be wholly preventive, and must partake of a sanitary character. Even these must of necessity prove at times inefficient and impractical. The proper inspection of all foods and sources of their supply will do much, however, to decrease the mortality and render such cases of less frequent occurrence, and we trust that ere long the measures for bringing about these results will reach a greater degree of perfection and will be more rigidly enforced.—*Medical Register.*

THERAPEUTIC PROGRESS.

Iodide of Mercury and Morphine.—Attention is called by Dr. Herding to the danger of prescribing morphine and iodide of mercury at the same time on account of the formation of a double salt of the two bases, which is highly poisonous.

Acid Hydrochlorate of Quinine.—Erba recommends this form of quinine for hypodermic use. Two grams being soluable in three grams of distilled water. It produces no irritation of the skin and admits of a comparatively large dose being used.

Hygrophila Spinosa.—A prickly plant common in the marshy places of Ceylon, is considered by the physicians of the island a superior remedy in dropsy. It is given in the form of a decoction, one ounce of the root to one pint of water; dose one to one ounce and a half daily.

Tannin for Burns.—An ethereal solution of tannin, of syrupy consistency, is said to be the best application in burns. It immediately soothes the intense pain, dries rapidly, and forms a pliable, non-elastic coating which is preferable to collodion, because it does not shrink and become stiff.

COCAINE AS AN ANTIDOTE TO STRYCHNINE.—M. Bignon finds, as the result of experiments on dogs, that hypodermic injections of cocaine, kept up until the strychnine has been eliminated, prevent a fatal result in cases where the dose of strychnine administered is not excessive, and retard it when large doses are used.

CARBOLIC ACID IN THE TREATMENT OF PUERPERAL SEPTICÆMIA.— According to *Nouveaux remèdies*, Sviedey recommends a pill containing a grain and a half of phenic acid, with a mixture of equal parts of gum arabic, powdered licorice, and soap—from two to ten such pills to be given in twenty-four hours.

FOR LUMBAGO, Professor Burggræve recommends the following:

℞. Collodion,
Tincture of iodine,
Ammonia water, āā.
M. S. Apply widely over the parts with a camel's hair brush.

PAPAYOLIN.—Dr. Schwimmer used papayolin in twenty-five cases of fissure of the tongue with excellent results. He used one to two parts of papayolin in ten parts each of glycerine and distilled water, applying the mixture from two to six times daily, with a camel's hair brush, after drying the surface. Pain was stopped and epithelium seemed to be renewed under its influence.

PEROXIDE OF HYDROGEN is recommended by Dr. B. W. Richardson, in the *Asclepiad*, as a remedy of some value in whooping-cough. He believes it to act like nitric acid subduing the spasmodic paroxysm, checking secretion, and shortening duration of the disease. It is, however, less effective than this acid. The formula employed is hydrogen peroxide, four drachms; glycerine, four fluid drachms; water, eight fluid ounces. Of this mixture half a fluid ounce is given in a wine-glass of water five or six times a day.

CALOMEL SUBCUTANEOUS INJECTIONS.—Dr. Krecke reports favorably upon the subcutaneous injections of calomel in the treatment of syphilis. The calomel is simply suspended in water containing an equal weight of sodium chloride, ten per cent. of each being usually used. Care should be taken to shake the bottle before using the mixture, and after the syringe has been filled it should be held needle downwards until the injection has been made. From one to two grains of calomel are injected deep in the gluteal region every five or six days.

BROMIDE OF ETHYL.—Dr. Pauschinger shows the important advantages of bromide of ethyl as an anæsthetic in minor surgical operations to be as follows: (1) Because its freedom from danger allows of its use in minor, though painful, operations in which the use of chloroform would not be justifiable; (2) its easy toleration, which spares the patient the disagreeable phenomena attending the chloroform necrosis; (3) its convenient management, which makes it possible for a practical operator to use it in case of need without an assistant. These advantages are combined with a rapid and effective anæsthetic action.

THE DIETETIC TREATMENT OF OBESITY.—A contributor to the *Union Médicale* credits M. Dujardin-Beaumetz with the following dietary for the reduction of obesity: *Breakfast* at 8 o'clock.—Two ounces of cold meat, an ounce of bread, eight ounces of weak tea without sugar. *Luncheon* at noon.—Two ounces of bread, four ounces of meat or stew or two eggs, four ounces of fresh vegetables, half an ounce of cheese, fruit *ad libitum*. *Dinner* at 7 o'clock.—No soup, two ounces of bread, four ounces of meat or stew, four ounces of fresh vegetables, salad, half an ounce of cheese, fruit *ad libitum*. In conjunction with this course, purgatives should be taken rather frequently, either mineral waters, pills, or powders, and the subject should take exercise in proportion to his strength, and employ massage.

ACTION OF ANTIPYRINE AND STRYCHNIA.—M. Chouppe has recently presented to the Société de Biologie the results of further observations on the joint action of these drugs. The convulsions caused by antipyrine differ very much from those caused by strychnia; they are much less tetanic, are not excited by external causes, and affect much less the respiratory muscles, so that asphyxia does not threaten life. If in an animal under the influence of antipyrine strychnia in more than a fatal dose be injected strychnia convulsions occur, but a new dose of antipyrine causes them to cease, and antipyrine convulsions, which may last many hours without causing the animal's death, replace them. It seems, then, that the two drugs administered in convulsive doses produce an attenuation in the rapidity of the development of convulsive phenomena.—*Semaine Médical,* July 20, 1887.

THE PECULIAR ODORS OF CERTAIN DISEASES.—In the concluding portion of a continued article on "Fever," published in the *Medical Chronicle,* James Niven, M. B., alludes to the diagnostic interest of the special odors attendant upon some of the infectious diseases. The odor of small-pox, he says, occurs only in the worst cases, and is probably due to the ptomaine generated in the process of necrosis. He then speaks of a peculiar sweet, almost aromatic odor of the breath that he has noticed in scarlet-fever patients, most marked in the early stages of the disease. A case is mentioned in which a nurse to whom he had pointed out the odor diagnosticated scarlet fever by means of it, in a patient at the height of an attack of small-pox, a whole day before any other scarlatinal symptoms were recognized. Somewhat similar odors are noticed in typhoid fever and measles, but the author says that they can readily be distinguished.

HYOSCIN IN PARALYSIS AGITANS.—Professor W. Erb speaks most highly of the usefulness of hyoscin in this form of paralysis. He has observed no positive cures obtained by its use, but marked palliation of the symptoms. In one case after long use a kind of remission was observed. The others were much helped. For some hours the patients were able to move their limbs freely and felt much more comfortable. The trembling was removed completely in some cases and in others almost so for several hours or for a quarter or half day. The usual dose was two to three milligrams; these small doses often also caused sufficiently marked by-effects to prevent their being increased. The improvement in the general condition was so much greater than the discomfort of the side-effects that the latter were not objected to by the patients. The by-effects usually noticed where the medicine acted with unusual power or was used in a larger dose than was readily borne were generally a feeling of weakness, drowsiness, heat about the face, dryness in the throat, some dizziness, uncertainty of vision and heaviness of speech.

SALICIN IN SCARLET FEVER.—Mr. W. P. Meharry, of Belfast, says: My experience has convinced me that the pure alkoloid (salicin itself) is by far the best form to administer the willow in this affection. If given early, after a free purge, the disease will certainly be arrested, but if the tonsils have become much swollen and hard, or if the pus has formed, nothing will prove effectual, and the disease will run its course. In scarlatina, especially in that form known as scarlatina anginosa, salicin is of great value. In those cases of simple scarlatina in which the disease is prolonged by the throat complication, salicin immediately effects a cure. I have treated during the last three years twenty-seven or twenty-eight of such cases, and in no instance has failure occurred. I do not consider it necessary or prudent to administer it in every case of scarlatina as a routine treatment. Salicylate of sodium should not be given, as poisonous symptoms set in when it is administered in large doses to young children. I generally give to a child four or five years of age five grains of salicin every two hours until the temperature becomes normal; afterwards the same quantity three times daily for a few days to prevent a relapse.

ACTINOMYCOSIS IN A GARDENER.—A case of actinomycosis occurring in the human subject is reported by Dr. Hanken, of Dortrecht, which appears to belong to what Dr. Israel classes as cases of migration of fungi through the mouth and pharynx. The patient was a gardener, aged thirty-four, who had nothing to do with the care of cattle. He applied for advice on account of long-standing dyspepsia. It was observed that there were four tumors on the lower jaw, situated between the left mental foramen and the angle of the jaw. They were movable and somewhat elastic on palpation. The teeth were fairly healthy, with the exception of the four second molars, all of which were carious; the roots, however, could be palpated without causing pain. The diagnosis appeared to lie between gummata and cold cutaneous abscesses due to irritation from carious teeth in a tuberculous subject. No signs or history of syphilis could be made out, so it was decided to draw the two diseased molars on the left side, open the tumors and scrape them out with a sharp spoon. The contents were found to consist of a viscous chocolate-colored fluid, in which opalescent granules, the size of a pin's head, were suspended; these proved, on microscopic examination, to be actinomycetes.

INCUBATION OF THE INFECTION OF MEASLES.—Dr. Sevestre, in a thesis recently published, demonstrates the fact that the period of incubation in measles is almost invariable—between thirteen and fourteen days elapsing between the moment of infection and the appearance of the rash. The fever appears four days earlier, namely, between the ninth and tenth day. Another fact, and one of far greater importance, has been determined by Dr. Sevestre, and that is that the infective power of the disease commences with the first moment of prodromic manifestations, namely, of the appearance of fever, and continues with unabated virulence until the eruption, after which its infective power diminishes very rapidly, vanishing entirely on the fifth day thereof. In the analysis of many hundred cases, not one instance of infection after the fifth day of eruption (the 18th or 19th after exposure) could be found. The practical bearing of these facts is manifest. They furnish a sure and valuable guide on points upon which the profession and laity have strangely blundered hitherto, namely, the proper time for isolation of the patient. The habit of sending off the apparently unaffected members of a family while the fever in an affected one is at its highest, is the surest method of transporting the infection and creating new foci of disease.

THE TREATMENT OF TAPEWORM.—In reply to a correspondent of the *Lancet*, several communications are published in that journal, including one from Dr. F. A. A. Smith, of Cheltenham, who says that during his stay in South Africa he treated many cases, his own included, and all with success. The great point in the treatment of tapeworm, he says, is to expose the head, which is attached to the intestine by its hooklets. So long as the head is covered with fæces no medicine will do much good. His treatment is as follows: The day before giving the worm medicine he allows no food of any kind, except plain beef-tea, or other very thin soup, and very little even of these. The first morning he gives one drachm of compound jalap powder, which generally operates three or four times during the day, and effectually clears out the bowels, bringing away at the same time large portions of the worm. The patient, of course, keeps quiet in the house. On the second morning, on an empty stomach, he gives a draught consisting of from two to three drachms of oil of turpentine and one drachm of oil of male fern in sweetened emulsion. After an hour or so he gives a dose of castor-oil. It will not be long before the whole of the worm with its head will have passed, which will be found on proper examination of the stools. The patient can then take his usual diet, and the following day will be well. He has never known this treatment to fail. The doses, of course, are intended for adults. The frequent failure of the oil of male fern as an anthelmintic is, he believes, attributable to the smallness of the dose exhibited, less than a drachm for an adult being useless. The writer believes every native in South Africa to be infected with one or two tapeworms.

Treatment of Infantile Eclampsia.—In the course of a well-written article on this subject by Dr. Jules Simon, in the *Journal de Médecine de Paris,* he says "since the digestive tube is almost invariably the seat of the prime cause of infantile eclampsia, our first care should be to evacuate the intestine by purgative lavements. If possible, an emetic should also be given by the mouth, but if the convulsions do not admit of this, an injection containing seven grains of chloral, fifteen grains of camphor and twenty drops of tincture of musk should be given by the rectum. Where the spasms have a tendency to recur at intervals of several hours, and there is no fever, a mustard bath will be found of great service. If convulsions persist, a blister should be applied to the back of the neck, which should be left in place for three hours only, and be replaced at the expiration of this time by a cataplasm. At the same time the following may be administered:

℞.	Potassium bromide	gr. xx to xxx.
	Musk	gr. iss.
	Cherry-laurel water	℥iv.
	Syrup of codeine	ʒiss.
	Slippery elm water	ʒiii.
	Simple syrup, enough to sweeten.	
M.		

The dose is a tablespoonful repeated *pro re nata.* It will be seen that M. Simon differs from Trousseau and others who are opposed to blisters and mustard, but he orders these cutaneous revulsives only when the patient is insensible and when they consequently cannot excite reflex convulsive effects. In convulsions due to albuminuria or uræmia, Simon recommends the application of leeches, one or two behind each ear, or to apply the scarificator and cups to the lumbar region and take from one to two ounces of blood. Even anæmic children will stand this loss under the circumstances. Children which seem predisposed to eclampsia and have frequent attacks should receive small doses of potassium bromide (three or four grains) repeated from time to time, every three or four days.

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ORIGINAL ARTICLES.

FEVER: ITS CAUSE, MECHANISM AND RATIONAL TREATMENT.[1]

BY PROFESSOR AUSTIN FLINT, M. D., LL.D., NEW YORK.

In the classical monograph on inanition, by Chossat, published in 1843, is the following sentence: Inanition is "a cause of death which marches in front and in silence in every disease in which alimentation is not in a normal condition."[2]

A few years later, Graves, of Dublin, insisting upon the importance of alimentation in the management of continued fever, said that if he had met with more success than others in the treatment of the disease, it was owing, in a great degree, to the counsel of a country physician of great shrewdness, who advised him never to let his patients die of starvation.

Nearly half a century has elapsed since Chossat, comparing the results of a series of elaborate experiments on the lower animals with pathological phenomena in the human subject, recognized inanition as a cause of death in diseases which were then treated by depletory and so-called antiphlogistic measures, and since the "shrewd country physician" advised Dr. Graves never to let his patients die of starvation. Within this half-century, the ideas embodied in the two quotations I have made have taken a permanent place among the accepted principles of the science of medicine. The researches of the physiologist enabled him to recognize the spectre of inanition, marching "in front and in silence" with disease, and the great clinical observer "fed fevers;" the natural history of many diseases, undisturbed by active therapeutical measures, has been studied, and the self-limited character of a large number of these diseases has been established; and now, in the treatment of certain cases, abortive measures having been found ineffectual, the resisting and recuperative powers of patients are sustained.

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[1] An address delivered in General Session, at the Ninth International Medical Congress, September 6, 1887.

[2] Chossat: Recherches expérimentales sur l'inanition. Paris, 1843, page 194.

An important result of the studies of physiologists with reference to animal heat, and of pathologists with reference especially to the essential fevers, is that, important organs being protected against serious complications and accidents, and the nutrition of the body being measurably supported, a fever may run its course, leaving the patient in a physical condition in which speedy and complete convalescence is almost certain. The life of an acute disease usually is short; and a self-limited disease, such as typhoid fever, is a morbid force which calls for resistance on the part of the system for but a certain time. In cases of acute disease, as a rule, there is an inherent tendency to recovery. A disease which involves in its course a rapid and abnormal consumption of matter within the body can rationally be met by the introduction and assimilation, if possible, of nutritive material to save or repair the destruction of tissue. That there is abnormal destruction of tissue in fevers is rendered certain by the progressive loss in body-weight and the marked increase in the elimination of carbonic acid and nitrogenized excrementitious matters; and it is the province of the physician to keep this loss within the lowest limits, and to repair it as speedily and as effectually as possible.

The principal object of this address will be to show how the metamorphosis of matter involved in the normal production of animal heat is accomplished, how the abnormal production of heat in fever, involving, as it does, abnormal activity in the metamorphosis of tissue, may be restricted, and how abnormal destruction of tissue may be limited and repaired.

It is well known to physiologists that the production of animal heat is one of the phenomena attendant upon the general processes of nutrition. It is also well known that the process with which the production of heat is most intimately connected is oxidation of certain matters which are either contained in food or form a part of the tissues of the body. This fact, a knowledge of which dates from the researches of Lavoisier, in the latter part of the last century, has now become firmly established; and the relations between the consumption of oxygen—with the production of certain excrementitious matters—and the generation of heat within the body have, in late years, been the subject of much physiological experimentation. Attempts have been made by Senator and others, to measure directly the quantity of heat produced in the body; with the result of showing that, in mammals, there are produced about four heat-units per hour, per pound weight of the body.[1] According to this estimate, a man weighing one hundred and forty pounds would produce thirteen thousand four hundred and forty heat-units in twenty-four hours.

While the direct method of estimating the heat produced by the body has some elements of uncertainty, it has the advantage, at least, of being similar to the method by which the heat-value of food has been ascertained. On the other hand, the indirect method, employed by some observers, which is said by Dr. Foster to be "as trustworthy as any," seems to me to involve such possibly enormous errors as to be of little value. This method consists in "simply substracting the normal daily mechanical expenditure from the normal daily income. Thus, one hundred and fifty thousand kilogramme-metres substracted from one million kilogramme-metres, gives eight hundred and fifty thousand kilogramme-metres as the daily expenditure in the form of heat."[2] In this method the only reasonably accurate element in the calculation is the "normal daily income," which is ascertained by estimating the heat-value of food in a normal diet. The calculation of the "normal daily mechanical expenditure," is inaccurate almost to the degree of absurdity. The force expended in the circulation and respiration is estimated, the force in locomotion and in other muscular work is guessed at, and all of these estimates of expenditure of energy are calculated in foot-pounds, or kilogramme-metres, which are afterward reduced to heat-units. Taking the estimate of the work of the heart alone, if Dr. Haughton's calculation of the quantity of blood discharged by each ventricular systole, which is three ounces, be accepted, a certain result is arrived at; while, if we accept—and on equally good authority—the view that the quantity discharged is between five and six ounces, the figures are nearly doubled, and the error is multiplied by about one hundred thousand beats of the heart in twenty-four hours.[1] The estimates, also, of the force used in respiratory movements, locomotion, etc., are not more reliable; and while it is admitted that one pound weight falling seven hundred and seventy-two feet will turn a wheel, the friction of which will raise the temperature of one pound of water one degree Fahrenheit, no one has been able to raise one pound weight to the height of seven hundred and seventy-two feet, or seven hundred and seventy-two pounds to the height of one foot, by using the heat which will raise the temperature of one pound of water one degree. In the calculations applied to physiological processes, it is always the heat produced which is converted into force; and in fixing the formula for such calculations, it is always the force which is converted into heat. It seems to me, therefore, that the most inaccurate of the direct methods of estimating the heat produced in the body is more useful than any calculations which involve such enormous sources of error as must exist in the estimates of daily mechanical expenditure. However, in the reflections that are to follow, I shall have nothing to do with the conversion of heat into force, but shall confine myself to the questions involved in the normal and abnormal production of heat in the human body.

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[1] The English unit-heat represents the heat required to raise the temperature of one pound of water one degree Fahrenheit. The Continental heat-unit represents the heat required to raise the temperature of one litre of water one degree centigrade. One heat-unit, Continental, equals about four (3.9628) heat-units, English. Four heat-units per pound per hour (English) would equal about one heat-unit (Continental) per pound per hour, or 2.2 heat-units (Continental) per kilogramme per hour. In what is to follow, I shall adopt the English standard for the heat-unit.

[2] Foster: Text-book of Physiology, London, 1883, page 459. A kilogramme-metre, or a kilogramme lifted a metre, is equal to 7.232 foot-pounds, or pounds lifted a foot. (Pavy: Food and Dietetics, Philadelphia, 1874).

The late Dr. John C. Draper, following the experiments by Senator and others upon the inferior animals, made a series of observations on his own person, in which he showed that his body, which he found was equal in bulk to three cubic feet, was capable of raising the temperature of three cubic feet of water five degrees Fahrenheit in an hour. During the observation, the temperature under the tongue was reduced one degree.[2]

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[1] Flint: The Source of Muscular Power, New York, 1878, page 70.

[2] Draper: The Heat Produced by the Body, and the Effects of Exposure to Cold. *American Journal of Science and Arts*, New Haven, December, 1872. Dr. Draper's experiments were made under conditions which possibly involved serious inaccuracies; and they are useful and interesting chiefly from the correspondence of the results with those obtained by Senator and others, in which corrections were carefully made.

Making the correction—which was not made by Dr. Draper—of one degree lost by the body and imparted to the water,[1] I estimated that the body produces four heat-units per pound weight per hour, which is nearly the result obtained by Senator, and that, consequently, a man weighing one hundred and forty pounds would produce thirteen thousand four hundred and forty heat-units in twenty-four hours, in a condition of absolute repose. This quantity would, of course, be increased by muscular exercise.

In a series of experiments made upon my own person, for twenty-four hours, under a liberal diet, I calculated the heat-value of the food ingested as equal to fourteen thousand nine hundred and seventy-nine and fifteen hundredths heat-units. At that time (1878), I weighed one hundred and eighty-six and one-half pounds, and, according to my estimate, I produced seventeen thousand eight hundred and eighty heat-units in twenty-four hours. There was no difference in the body-weight at the beginning and at the end of the observation.[2] This observation showed that nearly one-sixth of the heat estimated as actually produced by the body was not accounted for by the heat-value of the food taken. There can be little question with regard to the accuracy of the accepted methods for estimating the heat-value of articles of food; and it follows logically that there must either be a grave error in the estimate of the heat produced by the body, or that there are certain processes going on within the body not taken into account by physiologists, which involve a considerable production of animal heat. It is to be remembered, also, that I made no allowance for the conversion of a certain proportion of the heat produced in the body into force expended in circulation, respiration, locomotion, etc.

Indirect observations have shown that, out of the daily quantity of hydrogen introduced in organic combinations in the food, a large proportion (about eighty-five per cent.) cannot be accounted for by the organic ingredients of the excretions; and it has also been shown that there is generally an excess of water discharged from the body, over that introduced with the food and drink.[3] In another experiment made on my own person, in 1878, I fasted for thirty-three hours, beginning my observations on the discharge of water, nine hours after the beginning of the fast, in order to allow the digestion of the last meal to be completed. In twenty-four hours, the discharge exceeded the introduction of water by forty-six ounces. I calculated the quantity of water discharged, by deducting from the total loss of body-weight the loss of solid matters in the urine and the estimated loss of carbon by the lungs. The quantity remaining represented the loss of water in excess of the water introduced. The quantity of water introduced was twenty ounces. No feces were passed during this observation.

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[1] Flint: Experiments and Reflections upon Animal Heat. *American Journal of the Medical Sciences*, Philadelphia, April, 1879, page 343.

[2] Flint: Experiments and Reflections upon Animal Heat, loc. cit., page 355.

[3] Dalton: Human Physiology. Philadelphia, 1882, page 37.

In another observation, the total discharge of water for a period of five days was estimated by the following method:

The weight of the ingesta for the five days was added to the body-weight at the beginning of the observation. From this were deducted the weight of the urine and feces for the five days, the estimated weight of carbon eliminated, and the body-weight at the end of the observation. The result represented the total discharge of water by the lungs and skin, which, added to the water of the urine and feces, gave the total discharge of water. From this was subtracted the water introduced in food and drink. The total excess of water discharged for the five days was sixty-two and seventy-eight hundredths ounces.[1] The subject of this experiment weighed one hundred and nineteen and two-tenths pounds at the beginning of the observation. At the end of the five days, having walked three hundred and seventeen and one-half miles, he weighed one hundred and fifteen and seventy-five hundredths pounds.

The observations thus briefly described seem to show that, under certain circumstances at least, water is actually formed in the body by the union of oxygen with hydrogen. In the observation made fasting for twenty-four hours, the quantity thus formed was very large. If it can be assumed that water is formed in this way, the heat-value of hydrogen being very great, there is little difficulty in accounting for the heat which has been estimated by direct observation to be produced in the body, as well as for a considerable surplus of heat expended in the form of muscular force. The theory, however, that the oxidation of hydrogen in the body is an important factor in the production of animal heat leads to very interesting and somewhat novel reflections with regard to the physiological relations of water to the general processes of nutrition.

Water regarded as a product of excretion.—There are two substances that result from the physiological wear of the tissues, which may be taken as typical products of excretion. One of these, carbonic acid, is a non-nitrogenized principle; and the other, urea, is nitrogenized. Both of these principles are produced in the tissues and are carried by the blood to eliminating organs. The excretion of both is influenced by the activity of molecular changes in the body. It is with these principles that I shall compare the water which is, in all probability, formed in the body and discharged, under certain circumstances at least, in excess of the water of food and drink.

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[1] Flint: Human Physiology, New York, 1884, pages 516, 517.

An excrementitious substance is a principle discharged from the body and produced by physiological wear, chiefly in the form of oxidation, of the organism. It is probable that the organism, under normal conditions as regards alimentation, use of parts, etc., produces a quantity of excrementitious matter which is fixed between certain physiological limits. When the alimentation is excessive, a certain proportion of nutritive matter is represented in an increased discharge of excretions. This is marked as regards both carbonic acid and urea, particularly in the increased discharge of urea under an alimentation containing an excess of nitrogenized alimentary matters. Starch, sugar, fats, and albuminoids are not discharged from the body in health, but are eliminated in the form of carbonic acid, urea, urates, etc., and water. Muscular work increases immensely the discharge of carbonic acid, in a less degree the discharge of urea, and it notably increases the discharge of water.[1] Muscular work also increases the production of animal heat, but the temperature of the body is regulated within normal limits by evaporation from the general surface. When an excess of food is taken habitually and for a long time, there generally results an abnormal accumulation of fat, it being impossible for the elimination of carbonic acid to keep pace with the introduction and assimilation of food, unless there be a large expenditure of heat and force in muscular work. The excess of nitrogenized food is disposed of largely in the form of urea; but it is probable that a certain part of this excess is converted into fat, and the muscular substance cannot be increased in bulk except by exercise, and then only within certain restricted limits.

As compared with carbonic acid and urea, the water produced in the body seems, to a great extent, to be subject to the same laws. It is a product of oxidation with the organism; its production may be influenced by alimentation, independently of the quantity of water introduced, and by muscular work; it is discharged through organs recognized as organs of elimination, such as the lungs, skin, and kidneys; but its chief point of similarity with the matters generally recognized as excrementitious is in its mode of production.

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[1] Pettenkofer and Voit: *Journal of Anatomy and Physiology*, Cambridge and London, 1868, Volume II, page 181. "The elimination of water is very much increased by work, and the increase continues during the ensuing hours of sleep." This was one of the conclusions arrived at from experiments upon a man, twenty-eight years of age, kept for twenty-four hours in a large "respiration apparatus."

It has been thought that excrementitious principles, if their elimination be interrupted, are of necessity poisonous when retained in the system. This certainly is not true of water; but the opinion upon this point, with regard to principles commonly regarded as excrementitious, is now open to serious question. It is probable that carbonic acid is not in itself poisonous, and that its retention in the blood produces death by interfering with the absorption of oxygen. There are few conditions under which an animal can be placed, in which carbonic acid can be made to accumulate in great quantity in the blood without interfering with the supply of oxygen; but in the well-known experiments of Regnault and Reiset, dogs and rabbits were exposed for many hours to an atmosphere containing twenty-three per cent. of carbonic acid artificially introduced, with between thirty and forty per cent. of oxygen, without any ill effects.[1] It is now thought by some pathologists that the so-called uræmic convulsions are not due purely and simply to the poisonous effects of the retention of urea in the blood, although this is still an open question.

If it be assumed that water is produced *de novo* in the economy, in its method of production, it closely resembles carbonic acid; but it differs from carbonic acid in having certain uses so important as to lead to its frequent introduction with the food and drink. Its chief use, however, as regards nutrition, is as a solvent; but in this it is aided by carbonic acid, the presence of which, especially in the urine, increases the solvent properties of the liquids of the organism. It is evident, also, that water, as a constituent part of the tissues, tends to preserve their proper consistence.

The water of food and drink has important indirect uses connected with nutrition, both as a solvent of nutritive and excrementitious matters and as a constituent part of the tissues; but the water produced within the body by the union of oxygen with hydrogen behaves, in the manner of its production and elimination, like an excrementitious matter.

[1] *Annales de chimie et de physique*, Paris, 1849, 3me série, tomie XXVI.

If this view be accepted, it is evident that the two excrementitious principles, with the production of which the generation of animal heat is most closely connected, are water and carbonic acid. Under ordinary conditions of alimentation, the production of carbonic acid probaby has the greater relative importance; but in starvation, while the excretion of carbonic acid is diminished, the production of water, as shown in my starvation experiment, is probably very largely increased. It is evident that the production of carbonic acid is a much more important factor in the generation of animal heat than is the formation of urea. In the experiment referred to, I calculated the heat-value of the urinary nitrogen as equal to one thousand six hundred and seventy-seven and seventy-hundredths heat-units, and the heat-value of the carbon eliminated as equal to ten thousand seven hundred and fifty-nine and nine-hundredths heat-units. The deficiency, as regards the heat actually produced, must have been represented by the excess of water discharged, which amounted to forty-six ounces, the hydrogen of which has a heat-value equal to nineteen thousand seven hundred and fifty-one and seventy-five-hundredths heat-units.[1] Persons exposed to intense cold, as in the Arctic regions, are known to require enormous quantities of food rich in fatty matters;[2] and the production of carbonic acid is probably very greatly increased, although direct observations on this point are wanting.

The foregoing remarks on the physiology of animal heat have been simply preliminary to a discussion of fever; and the influence of the nervous system upon calorification, which is so important in disease, will be considered only in its pathological relations.

The mechanism of fever.—The phenomena and mechanism of fever in all its varieties constitute much too large a subject for full discussion within the proper limits of this address. It has been rendered probable by recent bacteriological studies that all of the essential fevers are due primarily to the presence of microörganisms, those producing typhoid fever, especially, having been isolated, cultivated, and accurately described. Fevers symptomatic of local inflammations will form no part of the question now under consideration; and I do not propose to take up the question of pyrexia due to exposure to external heat, as in insolation. The condition which I shall consider, as the type of fever, is the pyrexia in typhoid fever, produced by a definite microörganism and having a duration restricted within certain limits which do not present very wide variations. Typhoid fever is strictly an essential fever, producing, like other fevers, certain parenchymatous degenerations and certain secondary effects upon the nervous system; but it is only the nature, mechanism, and rational treatment of the fever itself which I propose to discuss.

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[1] The temperature under the tongue at the beginning of the twenty-four hours of the observation was 99° Fahrenheit. At the end of the twenty-four hours it was 97¾°.

[2] The late Dr. Hayes stated that on one occasion he saw an Esquimau consume ten pounds of walrus flesh and blubber at a single meal. (*American Journal of the Medical Sciences*, Philadelphia, July, 1859).

The cause of the pyrexia in typhoid fever is twofold. The more important factor is an exaggeration of the chemical changes taking place in the organism, which generate the animal heat within normal limits. A less important factor is a disturbance of the processes of equalization of the heat of the body mainly by the action of the skin. That an exaggeration of heat-producing processes within the body is an important element in the production of fever, is rendered certain by the excessive consumption of oxygen and discharge of carbonic acid and urea. In health, the discharge of carbonic acid and urea is compensated by the introduction of food, which also has a certain influence upon the quantities of these substances eliminated. In health, there are important influences, also, which depend upon muscular work and activity. In an essential fever, the heat-producing processes seem to be for the time removed from normal regulating influences. Even when no food is taken, the fever continues and the excessive discharge of carbonic acid and urea progresses. The regulating action of the skin is enfeebled or absent. In a fever in which no attempt is made to support the system by alimentation, the phenomena of inanition are added to those of the pyrexia. Simple inanition in a healthy subject is marked by a diminution in the excretion of carbonic acid and urea, with a lowering of the animal temperature, and there is usually but little muscular work. In an essential fever, it seems as if the body were at work, producing an excessive discharge of excretions, without adequate compensation by sufficient alimentation and without a proper regulation of the heat of the body by cutaneous transpiration. Assuming the failure of measures employed to abort the disease, the excessive waste of tissue pursues its course until the morbid processes are arrested by self-limitation, or until the patient dies, either from secondary effects, referable to the persistence of very high temperature, or from simple asthenia. In cases of death from uncomplicated typhoid fever, there is usually very great emaciation.

The waste of the organism usually is most marked as regards the adipose tissue, the destruction of which is probably represented in greatest part by the excessive discharge of carbonic acid. The muscles, too, undergo degeneration, which is at first of the variety called parenchymatous. The destruction of the muscular tissue is probably represented in greatest part by the excessive discharge of urea.

If we can logically view water formed in the body in the light of an excrementitious product, the formation of which in health is closely connected with the process of calorification, the changes noted in most of the cases of typhoid fever, as regards the production and discharge of water, become very important. In nearly all essential fevers there is thirst, but the discharge of water by the skin and kidneys is notably diminished, especially the discharge by the skin, which is dry and hot.

In health, the formation of water, with its inevitable genereration of heat, seems to carry with it the conditions for equalization of the animal temperature by cutaneous transpiration. In simple inanition, the tissues of the body are economized by the excessive formation of water and the increased prominence of this process in calorification. In health, when there is excessive muscular exertion, there is an increased discharge of water, as was noted by Pettenkofer and Voit. In fever, however, the fats and solid tissues undergo destruction and certain degenerations. The formation of water seems to be diminished, and certainly there is a diminished discharge of water from the body attending the increase in the discharge of carbonic acid and urea. Whatever be the essential cause of the pyrexia, the consumption of matter in the production of the excessive heat is chiefly of fat and muscular tissue; presenting a striking contrast to the process of calorification in simple inanition and in violent muscular exertion, which latter condition would actually raise the temperature of the body, were it not for the increased formation of water and the cutaneous transpiration. It would seem that in health, when there occurs any unusual demand for heat to be used in muscular work, the production of water, as well as of carbonic acid, is increased; while, in fever, the pyrexia is fed, so to speak, by the fatty and solid tissues of the body alone. In health, muscular work confined within normal limits induces nutritive activity and improved assimilation of food.

In fevers, the activity is mainly degenerative and the assimilative processes are seriously impaired.

These considerations lead naturally to some modification of accepted views with regard to the theories of fever, and render our ideas on these questions more positive and definite than heretofore. I shall express these ideas in the form of propositions, some of which are, to a certain extent, novel:

(1) It is probable that the original cause of most, if not of all the essential fevers, is a microörganism, different in character in different forms of fever.

This proposition is based upon bacteriological researches of recent date, especially with regard to typhoid fever.

(2) Defining fever as an abnormal elevation in the general temperature of the body, the pyrexia is due to the following modifications in the normal heat-producing processes:

(a) Oxidation of certain constituents of the tissues, probably by reason of the presence of microörganisms in the blood, is exaggerated independently of increased muscular work and without being compensated by a corresponding increase in the appropriation of nutritive material. This increased waste of tissue is represented by the excess of carbonic acid and urea excreted.

(b) The part which the formation of water within the body plays in the production of heat is either suppressed or is greatly diminished in prominence, together with the equalizing action of cutaneous transpiration.

This proposition is based upon clinical facts, which show an increased excretion of carbonic acid and urea and a diminished excretion of water in fevers, and upon experiments which show that muscular work, while it increases heat-production, increases the production of water.

(3) Fever produces abnormal consumption of fat, with parenchymatous degenerations, for the following reasons:

(a) The fat is consumed because it feeds the pyrexia more readily than do the other tissues of the body, and its consumption is the most important source of carbonic acid.

(b) Parenchymatous degenerations of muscular tissue and of the solid organs occur, chiefly because the abnormal transformations of these parts, which result in an excess of urea and which probably, also, contribute to the excess of carbonic acid, are not compensated by the appropriation of nutritive matters from the blood.

(c) It is well known that patients with unusual adipose or muscular development are likely to present a more intense pyrexia in fevers than are those whose adipose and muscular development is smaller.

Finally. *An essential fever is an excessive production of heat in the body, induced by a special morbific agent or agents, and due to excessive oxidation, with destruction of the tissues of the body, and either a suppression or a considerable diminution in the production of water.*

Suppression or great diminution of cutaneous transpiration in the essential fevers, while it contributes, in a measure, to the rise in temperature, is not itself a cause of fever.

I do not propose to discuss at length the influence of the nervous system on the normal production of heat or upon fevers. It is well known that the nervous system is capable of modifying the local circulations and of producing local changes in temperature. Some physiologists have endeavored to locate a heat-centre, as well as a vasomotor centre, and some varieties of fever are regarded as due to morbid action of nerve-centres, either direct or reflex. A consideration of these questions, except in so far as the nervous system is secondarily affected in fevers, would extend this address beyond its proper limits. I shall, however, allude to certain conditions of the nervous system in fevers in connection with what I shall have to say on the subject of treatment.

Rational treatment of fever.—Symptoms referable to the nervous system are nearly always more or less prominent in essential fevers of a grave character. In the great majority of cases, at least, the disturbances of the nervous system are secondary and are due to the pyrexia, being intense generally in proportion to the intensity of the fever itself. While the special morbific cause of typhoid fever is, of course, the cause of the delirium, coma vigil, hebetude, etc., observed in rare cases, it is rational to suppose that it acts as a secondary cause of these phenomena, by virtue of changes induced directly by the prolonged elevation of body-temperature; and the same may be said of the pulse, which is high usually in proportion to the intensity of the pyrexia. Certain it is, that a mere reduction of the temperature, by means which cannot be presumed to affect the special cause of the disease, is nearly always attended with an amelioration of the nervous symptoms and a reduction in the rate of the pulse.

The parenchymatous degenerations and the alterations in the structure of the muscles and of the secreting cells of glands are unquestionably due to modifications in nutrition produced by the action of microörganisms; and it is well known that in typhoid fever and in pneumonic fever these microörganisms are deposited in special parts, as the intestinal glands and the lungs. It is certainly a rational object of treatment to confine these degenerations within the narrowest possible limits.

While it is not possible exactly to limit different measures of treatment to particular phenomena, there are certain therapeutical indications specially called for by morbid processes which relate to different systems and organs of the body. These measures may be classified as follows:

(1) Reduction of the general temperature by the external application of cold.

(2) Reduction of temperature by the internal administration of antipyretics.

(3) Promotion of general nutrition by alimentation.

(4) Measures to supply to the system matters that can be consumed in the excessive production of heat, thereby retarding destruction of tissue.

The application of cold to the surface by means of cold baths, sponging, etc., is now almost universal in the treatment of the essential fevers. While the value of this therapeutical measure is undoubted, and while its employment of late years has unquestionably diminished the fatality and abridged the duration of typhoid fever, writers are not agreed upon an exact explanation of its mode of action.

If the proposition that fever is due to the excessive production of heat be accepted as true, the explanation of the beneficial effects of refrigeration of the surface in fevers seems to me to be very simple and entirely satisfactory.

In health, when the body is subjective to excessive cold, the normal temperature is maintained, not only by retarding the radiation of heat from the surface by appropriate clothing, but by an actual increase in the production of heat. External cold increases the consumption of oxygen and the production of carbonic acid. The increased production of heat is promoted by muscular exercise, and the material necessarily consumed is supplied by what, under ordinary conditions, would be an excessive assimilation of food, particularly of fatty matters, which have a high heat-value. The enormous consumption of fats in excessively cold climates is an evidence of this fact.

In fevers, there is an excessive production of heat, which raises the temperature of the body, partly for the reason that the equalizing action of cutaneous transpiration is impaired. If we remove part of this excessive heat by the application of cold to the surface, the temperature of the body is necessarily reduced, and it only remains for clinical observation to determine whether or not this reduction of temperature be beneficial. Its beneficial effects, however, are unquestionable.

Physiological and pathological conditions are thus brought into striking contrast; and the pathological phenomena are readily explained in accordance with physiological principles.

In the healthy body exposed to excessive cold, we have given the condition of cold. This is met by a physiological increase in the processes of calorification, and by protection of the surface against loss of heat.

In the organism affected with fever, we have given, as a fixed condition, an increase in the processes of calorification. This is to be met by artificial external conditions in which the excess of heat is abstracted from the body.

The clinical thermometer, the general condition, and the sensations of patients afford a sure guide with regard to the extent to which external cold should be applied in any individual case; and the application of cold to the surface is certainly a rational measure of treatment in fever.

The amelioration of the nervous symptoms and the reduction of the pulse-rate, which usually follow reduction of temperature by external refrigeration, are arguments in favor of the view that these symptoms are mainly due to the pyrexia itself and not to the direct action of the special morbific agent which produces the disease.

Analogous effects are produced, although in a different way, by internal antipyretic remedies, of which antipyrin and antifebrin are now extensively used in this country in the treatment of fevers. The mode of action of antipyrin is not well understood, but its efficacy and value in reducing temperature are universally acknowledged. Extended and complete observations on the influence of this drug upon the elimination of excrementitious principles are as yet wanting, but the recent experiments of Umbach, in Berne, show that antipyrin has an important action in diminishing the excretion of nitrogen.[1]

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[1] Archiv fur experimentelle Pathologie und Pharmakologie, Leipzig, 1886, Band XXI, Numbers II und III. According to these observations: "Antipyrin, like quinine and other antipyretics, materially lessens the elimination of nitrogenous matters, and can therefore be said to cause a decrease in the tissue changes of the respiratory and alimentary systems." *Therapeutic Gazette*, Detroit, September 15, 1886.

Alimentation in fever.—It is in accordance with accepted views concerning the physiological production of animal heat and its exaggeration in pyrexia, to supply food in fever, in such quantity as can be readily digested and assimilated, with a twofold object. The only possible objection to alimentation within the limits of assimilation would be clinical experience showing an increase in pyrexia or in other morbid symptoms; but clinical experience shows, on the contrary, that innutrition adds to the intensity of all the morbid phenomena characteristic of the disease. There is no disease in which the spectre of inanition is more prominently "a cause of death which marches in front and in silence" than in typhoid fever. An unusual physiological demand for heat is met by increased alimentation. The pathological increase in the production of heat in fever is attended eventually by destruction of tissue and results in degenerations.

The more prominent and important object of alimentation in fever is to supply or retard waste of tissue and degenerations. In so far as this end is attained, the ravages of fever are restrained. The disease having pursued its course, in proportion as its effects upon nutrition are restrained, the system is better prepared for rapid and complete convalescence.

A second object in alimentation, less prominent and important merely because more difficult and uncertain in practice, is to supply material for consumption, and thus far save destruction and degeneration of tissue.

The extent to which alimentation, therefore, is to he carried is limited only by the powers of the digestive system. Unfortunately, however, the degenerations and disturbances of function, which occur in fever, are prominent in the digestive organs. It is seldom, if ever, possible for a patient to assimilate food in sufficient quantity to repair the waste of tissue; but it is rational to endeavor to secure as much assimilation as is practicable. The difficulties in the way of efficient alimentation are due to degenerations of the glands of the stomach, to which are frequently added, degenerations of the secreting cells of the salivary glands and pancreas. The practical skill of the physician is taxed to the utmost, in individual cases, to overcome these difficulties; but the judicious administration of milk, eggs, farinaceous articles, meat-broths, meat-essences, etc., is always productive of good results. A part of the nutritive constituents of these articles goes to repair the waste of tissue, and it is logical to conclude that a part supplies matter consumed in the production of heat. It is also rational to assume that, the repair of tissue being carried to the greatest possible extent, the hydrocarbons and fats must be useful in supplying material for those processes which are represented by the excessive elimination of carbonic acid. In no case of fever is it possible actually to accumulate fat in the system during the progress of the disease; and hydrocarbons and fats introduced must contribute to the formation of heat and thus restrict parenchymatous degenerations.

The disturbances which follow an alimentation carried to a degree beyond the powers of the digestive organs afford a reliable guide as regards the extent to which food should be introduced in fevers; and, in my judgment, too little attention and care have been given to the administration of articles of food which have a high heat-value, such as fatty and farinaceous articles.

As a digression, bearing, however, upon the question of the value of fats in conditions involving excessive production of heat, I may allude to their use in pulmonary phthisis.

I assume it to be settled that phthisis is produced by a special microörganism. One of the most prominent general phenomena of phthisis is a constant elevation in the body temperature. When the disease is progressive, there is an increase in the heat of the body. When the disease is non-progressive, as indicated by physical signs, arrest of loss, and perhaps increase of weight and absence of bacilli from the sputum, the temperature of the body becomes nearly or quite normal. The pyrexia in phthisis is ordinarily not sufficiently intense to induce, of itself, serious disorders of digestion or much general disturbance; and the difficulties in the way of the assimilation of fats are usually not great. Leaving out of consideration, for the present, the effects of alcohol, there is no measure in the treatment of phthisis of greater recognized therapeutical value than the administration of fats.

The use of alcohol in fever.—Alcohol is a substance, the toxic effects of which, taken in excess, are quickly and distinctly manifested; and there are few agents more prompt and decided in their influence in cases of disease. Clinically, the effects of alcohol in diseases in which there is a tendency to death by asthenia are so marked, that it is often used indiscriminately and injudiciously. In the treatment of fever the immense benefit which follows the use of alcohol in certain cases has led, at one time, to its use under all circumstances; and its indiscriminate administration, on the other hand, has produced, from time to time, a reaction of opinion, leading to its suppression in cases in which it would be of great service. Many of the moral arguments against the use of alcohol in disease are entirely illogical, and could, with equal want of propriety, be applied to a number of important articles of the materia medica. Alcohol is a potent agent in the treatment of fever; and the clinical guides which should direct its administration are easily recognizable.

In no case of disease, except, perhaps, in certain instances of poisoning by animal venoms, should alcohol be administered to a point where the slightest degree of alcoholic intoxication is apparent.

Alcoholic intoxication is due to certain peculiar effects of alcohol upon the nerve-centres; and in order to produce these effects the alcohol must circulate in the blood. As these effects pass off, the alcohol is either oxidized or is eliminated by the skin, lungs, and kidneys. Under normal conditions of nutrition, the effects of alcohol are so rapid and transitory, and are followed by such decided reaction, that it contributes little or nothing toward a prolonged resistance to cold. Experience has shown that it cannot take the place of an abundant and a highly fatty alimentation in excessive cold, as in the Arctic regions; and under these conditions its constant use has been found to be positively injurious. The same remark is in a measure applicable to all conditions of healthy nutrition. In a continued fever, however, the conditions are radically changed. In accordance with the views which I have presented, the excessive production of heat in fever is a fixed condition, continuing for a certain period, which is limited by the duration of the disease. The phenomena referable to the pulse, to the nervous system, etc., are secondary to the pyrexia. The parenchymatous degenerations are the more remote changes of tissue which follow and result from transformations involved in the long-continued excessive production of heat. If these views be accepted as correct, any readily oxidizable substance artificially introduced, will, if it be oxidized, mitigate the secondary effects of the fever upon the pulse and nervous system and retard degenerations, provided, always, that it do not increase the intensity of the pyrexia. Experience is not wanting to show that these results follow the judicious administration of alcohol in fever.

Inanition is also a constant element in a fever long continued. In health, the formation of water in considerable quantity, in the production of heat, occurs in the first part of a period of deprivation of food, and this saves, to a certain extent, destruction of the solid tissues. One of the most marked and constant conditions in fever is a disturbance of the heat-producing processes, in which the solid tissues are consumed and the production of water is greatly diminished. It is a rational object of treatment to endeavor to restore the normal equilibrium between the consumption of the so-called solids and the formation of water, as factors in the production of heat. If it were possible to introduce farinaceous and fatty articles of food in sufficient quantity in fever, it might not be necessary or desirable to use alcohol; but the condition of the digestive organs is such that these articles are slowly and imperfectly prepared for absorption. Alcohol, however, requires no preparation by digestion. It is promptly taken up by the blood, and is oxidized even more readily in fever than in health.

It is well known that saccharine and starchy articles of food, as well as the liver-sugar, rapidly disappear, and that starch is converted into sugar in digestion. In a remarkable paper by Dr. William Hutson Ford, a number of interesting experiments are published, showing the presence of alcohol in small quantity in the normal blood, resulting, according to Dr. Ford, from the decomposition of sugar. In this paper, Dr. Ford makes the following statement:

"The destination of alcohol, whose presence in the economy I have thus demonstrated, must be to a hæmal oxidation or 'combustion,' as a main source of animal heat. This combustion is maintained, not only by glucose derived from amylaceous food, but likewise from the proximate products of change in the nitrogenous tissues."[1]

The thermal phenomena observed in diabetes mellitus are of much interest in connection with the theory that hydrocarbons are converted into alcohol, the oxidation of which is an important factor in the production of animal heat. In nearly all cases of diabetes there is a constant and persistent depression of the animal temperature. The principal pathological condition in this disease is manifested by a discharge from the body, in the form of sugar, of the hydrocarbonaceous elements of food; and, as a consequence, these substances are not used in the production of heat. The result is a constant depression in temperature, with a loss of weight which is often very rapid,[2] due to a consumption of the fatty and nitrogenized parts of the tissues, and certain parenchymatous degenerations which are observed particularly in the cells of the kidneys. It may seem paradoxical to say that diabetes is attended with a fever in which the temperature of the body is depressed. In progressive phthisis there is actually a fever, marked by elevation of temperature. In diabetes the fatty and nitrogenized parts are consumed to an abnormal extent, as in fever; but the heat-producing action of the hydrocarbons being suppressed, even this excessive consumption of fats and albuminoids is inadequate to maintain the normal standard of the bodily temperature. The theory that the hydrocarbons are converted into alcohol which is oxidized in the body is entirely in accordance with my view that the production of water is an important factor in the generation of animal heat. If alcohol be oxidized in the body, as it is in certain quantity, the production of water is inevitable. The heat-value of the hydrogen in alcohol being very great, and if—the hydrocarbons being discharged in the form of sugar in diabetes—the normal heat of the body be not maintained, the final oxidation of these hydrocarbons, with the consequent production of water, is an important factor in the production of animal heat. The excessive quantity of water discharged in diabetes probably comes in great part directly from the blood and the watery parts of the tissues, which accounts for the intense thirst always observed in grave cases of this disease.

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[1] Ford: The Normal Presence of Alcohol in the Blood. *New York Medical Journal*, June, 1872, page 594.

[2] The history of a diabetic patient who consulted me in November, 1885, showed a loss of weight amounting in three years to one hundred and forty-five pounds. The patient was six feet three inches tall, and

In the administration of alcohol in the treatment of fever, we are really using the hydrocarbons in a form in which they may be immediately oxidized and do not require preparation by digestion. Thus we easily supply material to meet the excessive waste involved in the pyrexia, in much the same way as we administer peptonized albuminoids to meet the excessive waste of the nitrogenized parts of the tissues when the digestive powers are impaired.

It is a matter of universal clinical observation that there is great tolerance of alcohol in fevers and in pulmonary phthisis. This tolerance of an agent which is probably never useful in perfect health is strong evidence of a demand on the part of the

weighed, before the disease was recognized, three hundred and seventy-five pounds. Under treatment for five days, the quantity of urine was reduced from one hundred to forty fluid-ounces, and the proportion of sugar from twenty-seven to two grains per ounce. The patient then passed from under my direct observation, and the discharge of sugar was increased by indiscretions in diet. Ten months after, the patient wrote me that he "felt perfectly well," and had gained forty pounds in weight.

system for the class of alimentary principles, the hydrocarbons, which alcohol represents; and it affords an absolute guide as regards the quantity that should be employed. The quantity which will be useful in individual cases may be small or it may be great. In certain exceptional cases, one or two ounces of spirit may be administered hourly for a day or two, with the best results; and this quantity may be taken without the slightest manifestation of alcoholic intoxication. With an alarmingly high temperature, a rapid and feeble pulse, and grave ataxic symptoms indicating impending death, alcohol may be given largely, but never to the extent of producing its characteristic toxic effects.

In fever only such quantity of alcohol as is readily oxidized is useful; and any excess, which will certainly produce some degree of alcoholic intoxication and which must be eliminated as alcohol, will be productive of harm. In ordinary cases of continued fever it is seldom necessary or desirable to give more than eight or ten ounces of spirit daily.

I do not wish to be understood as advocating an indiscriminate use of alcohol in all cases of fever. Alcohol is indicated by an excessively high temperature, with the ataxic and other symptoms to which I have referred. In ordinary cases of typhoid fever, particularly in the early stages, it should be administered sparingly, cautiously, and tentatively. Its quantity should be reduced or it should be omitted at the first indication of alcoholic intoxication. Nevertheless, alcohol, judiciously administered, so that all that is introduced is promptly and completely oxidized, as it contributes material for consumption in the production of excessive heat, exactly in that degree does it retard destruction and degeneration of tissue, and it should be employed to supplement the use of matters that are regarded as nutritive.

In a paper published in 1879, I made a calculation of the heat-value of the ordinary brandy of the pharmacopœia, which I venture to quote:

"According to Brande,[1] cognac brandy contains forty-six per cent. of absolute alcohol. With a specific gravity of 0.930, one ounce of brandy weighs 406.875 grains and contains 187.1625 grains of alcohol. The alcohol, with a composition of $C_4H_6O_2$, contains 12.9 per cent. of hydrogen, or 24.14 grains, and 56.65 per cent. of carbon, or 98.54 grains. The heat-value of 24.14 grains of hydrogen equals 214.77 heat-units. The heat-value of

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[1] Brande & Taylor: Chemistry, Philadelphia, 1867, page 583.

93.54 grains of carbon equals 182.44 heat-units.[1] Taking, then, the total heat-value of the hydrogen and carbon contained in one ounce of brandy, and taking no account of the oxygen contained, the heat-value amounts to 397.21 heat-units.[2] If we assume that a man produces four heat-units per pound weight of the body per hour, the amount of heat normally produced in twenty-four hours by a man weighing one hundred and forty pounds is equal to 13.440 heat-units. The quantity of brandy required to supply this amount of heat, according to the calculations I have just made, would be a little less than thirty-four ounces. Theoretically, then, it is easy to see how alcohol may furnish material to supply heat and save waste of tissue in fevers. It is not very unusual in certain stages of fever, to administer from sixteen to thirty-two ounces of brandy in twenty-four hours."[3]

I am deeply sensible of the great honor of an invitation to address this Congress. This invitation I felt bound to accept, although with a full appreciation of the responsibility which it involved and with much doubt and timidity with regard to my ability to do even a small measure of justice to the occasion. I have selected a topic of great present interest, which has been the subject of much fruitful study within the last few years. In discussing this subject, I have endeavored to apply the physiological methods of study which have lately contributed so largely to the advancement of pathology and therapeutics. I have been led by my reflections upon animal heat and fevers to present certain views which I venture, in conclusion, to summarize in the following propositions:

(1) Fevers, especially those belonging to the class of acute diseases, are self-limited in their duration, and are due each one to a special cause, a microörganism, the operation of which ceases after the lapse of a certain time.

(2) We are as yet unable to destroy directly the morbific

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[1] Mayer: Celestial Dynamics. Correlation and Conservation of Forces, New York, 1868, page 261.

[2] It is well known that the heat-value of certain elements in combination is less than of the same elements in a free state, as was shown by the experiments of Favre and Silbermann, made many years ago; but with regard to alcohol, the difference is only about one-third of one per cent. Favre et Silbermann: Annales de chimie et de physique, 3me série, Paris, 1852, tome XXXIV, page 357, and Milne Edwards: Lecons de physiologie, Paris, 1863, tome VIII, page 25.

[3] Flint: Experiments and Reflections upon Animal Heat. *American Journal of the Medical Sciences*, Philadelphia, April, 1879, page 362.

organisms which give rise to continued fevers; and we must be content, for the present, to moderate their action and to sustain the powers of resistance of patients.

(3) The production of animal heat involves oxidation of parts of the organism or of articles of food, represented in the formation and discharge of nitrogenized excrementitious matters, carbonic acid and water.

(4) As regards its relations to general nutrition and the production of animal heat, water formed in the body by a process of oxidation is to be counted as an excrementitious principle.

(5) Fever, as observed in the so-called essential fevers, may be defined as a condition of excessive production of heat, involving defective nutrition or inanition, an excessive production and discharge of nitrogenized excrementitious matters and carbonic acid, with waste and degeneration of the tissues, and partial or complete suppression of the production and discharge of water.

(6) Aside from the influence of complications and accidents, the ataxic symptoms in fevers, the intensity and persistence of which endanger life, are secondary to the fever and are usually proportionate to the elevation of temperature. These symptoms are ameliorated by measures of treatment directed to a reduction of the general temperature of the body.

(7) The abstraction of heat by external cold and the reduction of temperature by antipyretics administered internally, without affecting the special cause of the fever, improve the symptoms which are secondary to the pyrexia.

(8) In health, during a period of inanition, the consumption of the tissues in the production of animal heat, is in a measure saved by an increased production and excretion of water.

(9) In fever, the effects of inanition, manifested by destruction and degeneration of tissues, are intensified by a deficient formation and excretion of water.

(10) Alimentation in fever, the object of which is to retard and repair the destruction and degeneration of tissues and organs, is difficult mainly on account of derangements of the digestive organs; and this difficulty is to be met by the administration of articles of food easily digested or of articles in which the processes of digestion have been begun or are partly accomplished.

(11) In the introduction of the hydrocarbons, which are important factors in the production of animal heat, alcohol presents a form of hydrocarbon which is promptly oxidized, and

in which absorption can take place without preparation by digestion.

(12) Precisely in so far as it is oxidized in the body, alcohol furnishes matter which is consumed in the excessive production of heat in fever, and saves destruction and degeneration of tissue.

(13) The introduction of matters consumed in the production of heat in fever, diminishes rather than increases the intensity of the pyrexia.

(14) As the oxidation of alcohol necessarily involves the formation of water and limits the destruction of tissue, its action in fever tends to restore the normal processes of heat-production, in which the formation of water plays an important part.

(15) The great objects in the treatment of fever itself are to limit and reduce the pyrexia by direct and indirect means; to limit and repair destruction and degeneration of tissues and organs by alimentation; to provide matters for consumption in the abnormal production of heat; and thus to place the system in the most favorable condition for recuperation after the disease shall have run its course.

CLINICAL LECTURES.

ON LIPOMA OF THE ABDOMINAL WALLS.

BY PROFESSOR TILLAUX, PARIS, FRANCE.
Hôtel Dieu Hospital.

REPORTED FOR THE PHYSICIAN AND SURGEON BY OUR PARIS CORRESPONDENT.

We have to remove three circumscribed fatty tumors, which you know are called lipoma, this morning. One of them in the lumbar region has no particular points in it to speak of; but the other two, by their localization in the groin, and at the umbilicus, could readily cause quite an error in diagnosis; so I will call your attention to them.

In a general way these tumors present themselves in two different ways: first, they contain nothing but cellulo-adipose tissue, with but very little conjunctive tissue; they are simply a mass of grease in one single spot, such as is always found throughout the body close under the skin. The second sort contains a great deal more of conjunctive tissue, and has a number of fibrous partitions. These are what Cruveilhier calls adipo-fibrous tumors, and the old authors called them steatomes. These two above forms are the usual ones, but there are rare varieties that we will not speak of now. But there is an important clinical distinction that you must not forget: that is, that lipoma may be lobulated or spread out in sheet form. The first kind are easy to diagnosticate, as they, first of all, give a clear sensation of fluctuation to your hands, and next you see the tumor; but the second variety is flat, soft, and gives but rarely any fluctuation, and it is difficult to say if they are tumors, or only an increase of fat in the part. Our two patients this morning are afflicted with just such tumors.

The first one is situated in the left iliac fossa, just above Poupart's ligament. It can be pushed upwards but not downwards. If we have the patient contract his abdominal muscles the mobility of the tumor is not at all altered, so that the tumor is subcutaneous. Why, then, will it not allow itself to be pushed downwards, as it must be in front of the strong fibrous aponeurosis? Why, simply because the subcutaneous inguinal region presents a special disposition which differs from all other parts of the body, and here this clinical fact can be shown to you if you will remember the anatomical arrangement. You know the fibrous element here is in three sheets which converge from above to form the arcade spoken of as Poupart's ligament or the Fallopian arcade. These three sheets are from before backwards, the aponeurosis of the oblique major, the transversalis fascia, and the iliac fascia, and from the arcade falling below is the fascia lata. In front of these fibrous walls is the skin but we must not forget the fascia superficialis which, just at this point, is important because it presents here *two* sheets or leaflets, one of which continues directly with the fascia superficialis of the thigh, but the other stops short and inserts itself solidly into Poupart's ligament, so you see there is a portion of the subcutaneous region of the abdominal walls that is limited to the Fallopian arcade below, and explains why this tumor cannot pass downwards. It is just the same in cases of emphysema following fracture of a rib. It will stop short here. I do not call your attention to this fact without teaching you a practical lesson in regard to it. A few years ago a young man was brought to me who for twenty years had been wearing a hernia bandage and had at that moment symptoms of colic, vomiting, etc., which the presence ot the bandage at once caused his doctor to think of strangulated hernia. On careful examination I found simply a lipoma of the inguinal region which some one had taken for a bubonocele and his present symptoms were only a fit of indigestion. A slight operation rid him of his hernia bandage and lipoma at once. Such errors are more common than one would think, but if you will remember to push up the scrotum on your finger and follow up the external orifice of the inguinal canal you can soon see that such tumors are independent of it. With our present patient there is no such trouble. I only use him to illustrate this point.

Our second patient is a woman of forty who is employed in a bookstore to carry heavy books about, which she does, resting them on her abdomen, and she thinks that this has caused her tumor. It is about as large as an egg and is just below the umbilicus. It is a tumor of the linea alba that merits some attention if not a special description among fatty tumors. The linea alba is not as you know what its name indicates, that is, a simple white line down the middle of the belly. The recti abdominal muscles are quite close together below the umbilicus but above they widen out and leave the linea alba larger, and loosly arranged. The whole question is for us to decide now whether this is a lipoma or simply a lump of fatty matter that has pressed up between the recti muscles, and according to the answer the treatment would be quite different, for if we operate in the last case we will fall upon the peritoneum. The localization of this tumor in the median line of the lower belly is a presumption in favor of a fat hernia because the interstices between the crossed fibres of the linea alba are actual roads open to such hernias. Again, our patient has had her abdomen distended by three confinements, and I have not the least doubt that we have here simply a lipoma. I will give you my reasons why I make this diagnosis: If it were a hernia it would have a pedicle that would be large it is true, but still it would move when she coughed or made an effort of any kind. Again, this body moves more easily than a hernia of fat would, and those of you who have some experience putting your hands on the abdomen of the patient can detect a difference that is difficult to explain, also we find no funtional symptoms, such as cramps after meals, vomiting, etc. You see the difficulty you may have in making a diagnosis of lipoma of the abdominal walls and that is why I call your attention to a few points that may help you to clear up such matters.

I employ the method of enucleation from behind forwards in such tumors as a rule, after first dividing the lipoma in two from one end to the other. This I will follow in the first patient who has the tumor in the groin, but for the woman I will go more slowly. My incision here will go only until I touch the surface of the tumor, and from there I will dissect out piece by piece until we reach the deep face of the lipoma that I believe it to be.

NOTE.—The operations conducted as above, justified the correctness of the diagnosis and were followed by complete cure.

EDITORIAL PERISCOPE.

POST-GRADUATE SCHOOL.

At the last meeting of the Board of Regents, of the University of Michigan, the chairman of the special committee appointed at a previous meeting of the board for the purpose of investigating the practicability of establishing a clinical branch of the medical department in connection with the hospitals in Detroit, made his report. In it the committee state that they "do not see how at present it is practicable to make any change in the medical department by having one year at Detroit." "The only way," continues the chairman of the committee, "that I see of establishing the clinical school in Detroit is to establish it as a post-graduate course, to be open to graduates of all recognized medical schools in the country, and giving graduates of Michigan University special advantages. I think this would be an advantage to the medical school, and a credit to the university. Such a plan I think would be successful."

This report was accepted, showing that it is the opinion of the board that a clinical branch in Detroit "*would be an advantage to the medical school and a credit to the university.*" Those who advocate the clinical branch as a required part of the medical course of study give these reasons for its establishment, but they show higher and more important reasons. They show that all students should have these advantages before graduation. They show that since such advantages can be obtained, the University is in fault if it does not supply them. To recommend a post-graduate school because it will be a *credit* to the university is quite commendable, but how much more laudable to establish a clinical branch, not as an optional course but a required course, because it will better fit the graduates to suppress disease, relieve suffering, and preserve health.

If it is the duty of the state to provide for a higher education, and to direct the studies of such education, that duty is not discharged until the best possible means have been provided and the best possible results obtained.

The Board of Regents advocate a post-graduate school in Detroit, to be taken as a third year by graduates of other medical schools which issue diplomas on two courses of lectures of six months each, but oppose all efforts to establish, or even the discussion of the establishment of a year of clinical study for the students of its own university who have attended two years of lectures of nine months each. We cannot fail to see the injustice of the measure. That would place the graduates of the Department of Medicine and Surgery, who spend twenty-seven months in thorough lecture work, in a course of study that must be gauged for graduates who have had scarcely more than a third of this preparation. Regarding "special advantages," to university graduates, these cannot be given in special instruction or privileges, but can only be made in the price of tuition.

No; such a plan would not be a success, but those who hope to see a clinical branch of the medical department in Detroit, will be encouraged when they learn of the concessions made in the report of the committee.

CONDENSATIONS.

[The "Condensations" of this issue are made from abstracts of the papers read at the Ninth International Medical Congress, as reported by the secretaries of the various sections].

Many of the diseases attributed to climate have been due to local insanitary causes.—Dr. Gihon.

Dr. Blitz always uses hot water in the treatment of iritis, and finds it an efficient adjuvant to the ordinary mydriatics.

A trip across the western plains from Leavenworth to Santa Fe is one of the best remedial agents in consumption.—Dr. Parker.

Dr. Charpentier, of Paris, narrated, in discussion, the history of a case of pregnancy, complicated by hydramnios, in which Dr. Hicks's sign of intermittent contractions of the uterus of pregnancy had been of a very great aid.

HOT WATER, employed by the aid of an inverted glass containing four or more ounces, may be continued several minutes at a time to an inflammed eye. It is found of great service in all cases of iritis.—Dr. Connor.

STUDY OF CLIMATOLOGY.—Dr. Parker called attention to the prevailing ignorance of climatology among the medical profession. He does not recommend Southern California and Florida as resorts for phthisical patients on account of the high humidity of those regions.

THE REMOVAL OF SEQUESTRA BY ACID.—Dr. Andrews, of Chicago, gave a description of his experiments, and related a number of cases in which the sequestra had been removed by the use of acids. He recommends that hydrochloric acid be used of a strength a little weaker than the officinal dilute acid.

THE TREATMENT OF PSOAS ABSCESS BY POSTERIOR LUMBAR INCISION, the title of a paper by Dr. Sayre in which he strongly insisted on the early and free posterior and anterior incision in these abscesses. Dr. Owen, of London, and Dr. Chavasse, of Birmingham, supported the author's view, and advised early opening of the abscess with free drainage.

THE ÆTIOLOGY OF PHTHISIS.—Dr. Phillips, of Edinburgh, from experiments with a substance extracted from the sputa of phthisical patients, had been led to believe that the disease was due primarily to the bacillus tuberculosis, which produced a ptomaine, and that this caused the sweating, fever, and other symptoms of phthisis. In his experiments this appeared to be antagonized by atropine, which explained the therapeutic value of the latter in phthisis.

THE USE OF COWS' MILK IN THE ARTIFICIAL FEEDING OF INFANTS.—Dr. Vaughan in his very able paper stated "that the ferment which produces tyrotoxicon is either the bacillus butyricus or some closely allied germ. We know that the butyric acid ferment does grow and thrive often in the human stomach." He then gave the following practical conclusions: "First, cows' milk used as a food for infants must be taken from healthy, properly-fed animals; second, it must be preserved from putrefactive changes while being transported and stored for the child's use; and, third, after having been taken into the child's stomach it must be preserved from putrefactive changes, and this cannot be done so long as the child is overfed and breathes an atmosphere laden with the germs of putrefaction."

VICARIOUS MENSTRUATION.—Dr. MacCallum, of Montreal, considers it of great importance for the proper understanding, regarding what really constitutes vicarious menstruation. He regards three main conditions necessary to constitute what he conceived to be a case of vicarious menstruation: Absence of a flow of blood from the uterus at the menstrual epoch; an eruption of blood from some other organ; absence of any cause for the ectopic hemorrhage, other than arrested menstruation.

BONY UNION AFTER INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR.—Dr. Carnochan presented the specimen, in connection with his paper, from a case of fracture of the neck of the femur, occurring in an old lady, seventy years of age, in which bony union followed rest in bed for a period of nine months. Dr. Morris, of New York, does not recommend treatment of rest in bed as a general practice. Unless the fracture is an imparted one, there is no hope of union, and the sooner these patients are gotten out of bed the better.

ALCOHOL AS AN ANÆSTHETIC.—Dr. Link, of Terre Haute, advocates the use of whiskey as an anæsthetic. He uses a full-proof whiskey at least two years old, giving from one to two ounces, repeated every three to five minutes, according to the rapidity of the absorption. The quantity required varies from sixteen to twenty-four ounces. The patient is then given half an hour to quiet down. If the desired effect is not produced a few inspirations of chloroform are given. The two agents combined give better results than either alone. The author claims an experience of twenty years, and reported a number of cases in which this method was employed.

RECTAL REFLEXES.—Dr. Matheus, in a paper on "The Anatomy of the Rectum in Relation to the Reflexes," demonstrated the relationship between the rectum and various functional and nervous diseases which are so often met with in practice. The nerve and blood supply of the rectum forms a connecting link between the sympathetic and general nervous system, being the seat of a complete network of nerves which not only control the vascular supply to the parts, but, from their action upon the muscular structure, interfere with the normal functions of the organ. He cited cases from practice, where hemorrhoids, ulcerations, etc., when treated locally, resulted not only in cure of the ordinary difficulty but of the severe constitutional symptoms of which it was the result.

MEDICAL TREATMENT OF UTERINE CANCER.—Dr. Cordes, of Geneva, Switzerland, considered this method of treatment applicable to those cases in which radical operation was inexpedient or impossible. Many cases in which palliative treatment alone is used survive a long time, perhaps as long as if operative measures had been adopted. Among the substances which may be used topically are solutions of sulphate of copper, sulphate of iron, bromine, acetic acid, iodized glycerine, pepsin, and papaine. The author gave the preference, however, to terebene, which he is in the habit of applying on cotton-wool, every two or three days. His results with such applications have been very satisfactory.

TREATMENT OF TUMORS OF THE BREAST BY ELECTROLYSIS.—Dr. Garratt, of Boston, points out the great necessity that the tumor should be seen in its early stage. He uses broad and soft electrodes, the whole surface over the tumor being submitted to the action of the current. The current should not exceed five to fifty milliampheres, according to the resistance, and should be applied twenty to thirty minutes, every day or every other day. In some cases only three or four applications were necessary, in others twenty to thirty. The interrupted current might be used for a few minutes after having used the primary. The author had treated one hundred and eighty cases of mammary tumors by this method, and in one hundred and fifty-seven there had been a cure, with no recurrence, so far as he knew, in a single case.

CHLORATE OF POTASH.—Dr. Coghill, of the Isle of Wight, expressed his opinion that this drug had been unjustly and too hastily relegated to an inferior therapeutic position. The therapeutic properties of chlorate of potash, it may be stated, generally, are those suggested by its chemical constituents and properties. In all states of the system where the blood is impoverished either in amount or quality, when its nutritive efficiency, especially as regards oxygen, is impaired, the chlorate of potash is indicated, either alone or in such combinations as the complexity of the conditions present demand. It is a cardiac stimulant in small doses, and seems to exert an important influence on the nutrition of these tissues generally. Its action as an antiseptic, particularly in arresting chemical decomposition within the body, is to be considered as one of its most valuable properties.

THE DISEASE OF INEBRIETY AND ITS TREATMENT.—Dr. Crothers stated that inebriety had been lately recognized as a disease controlled by certain laws. He said the craving for spirits is not the disease, but a symptom of it. The diseased nerve-centres crave something in the shape of a narcotic, which craving, alcohol best supplies. The phenomena of the paroxysms suggest the storms of epileptics. Inebriety in America is becoming more marked in mental phenomena, more often concealed by the patient, more often ends in organic disease. It is on the increase in this country, while moderate drinkers are decreasing. Moral means, prohibition, educational methods have been tried, and found ineffectual. Every inebriate sent to jail is more unfitted for temperate living. He suffers from cerebral anæmia, and needs better food and other influence than that of the jail. All the efforts of church, state, and society are merely increasing the number of inebriates. Inebriety is a curable and preventable disease. Inebriates should be quarantined and treated like the insane, since they are insane. This could best be done in work-house hospitals. Their practical success is demonstrated by the results of even such inebriate hospitals as there are, of whose cases twenty per cent are cured.

NEW PUBLICATIONS.

A SYSTEM OF AMERICAN GYNÆCOLOGY. BY AMERICAN AUTHORS. Edited by Matthew D. Mann, A. M., M. D., Professor of Obstetrics and Gynæcology in the Medical Department of the University of Buffalo, New York. Volume I. Illustrated with three colored plates and two hundred and one engravings on wood. 8vo.: seven hundred and eighty-nine pages. Cloth, $5.00; Leather, $6.00; Half Russia, $7.00. Philadelphia: Lea Brothers & Company.

LIST OF AUTHORS AND SUBJECTS.

Chapter I.—History of American Gynecology. By Edward W. Jenks, M. D., LL. D., Detroit, Fellow of the American Gynecological Society.

Chapter II.—Development of the Female Genitalia. By Henry J. Garrigues, A. M., M. D., New York, Obstetric Surgeon to the New York Infirmary, and Physician to the Gynecological Department of the German Dispensary of New York City.

Chapter III.—The Anatomy of the Female Pelvic Organs. By Henry C. Coe, A. M., M. D., New York, Pathologist to the Woman's Hospital of the State of New York.

Chapter IV.—Malformations of the Female Genitalia. By Henry J. Garrigues, A. M., M. D., New York, Obstetric Surgeon to the New York Infirmary and Physician to the Gynecological Department of the German Dispensary of New York City.

Chapter V.—Gynecological Diagnosis. By Egbert H. Grandin, A. M., M. D., New York, Instructor in Gynecology at the New York Polyclinic.

Chapter VI.—General Consideration of Gynecological Surgery. By E. C. Dudley, A. B., M. D., Chicago, Professor of Gynecology in the Chicago Medical College; Gynecologist to Mercy Hospital.

Chapter VII.—General Consideration of Gynecological Therapeutics. By Alexander J. C. Skene, M. D., Brooklyn, Professor of the Medical and Surgical Diseases of Women, Long Island College Hospital.

Chapter VIII.—Electricity in Gynecology. By Alphonso D. Rockwell, M. D., New York.

Chapter IX.—Menstruation and its Disorders. By W. Gill Wylie, M. D., New York, Professor of Gynecology in the New York Polyclinic; Gynecologist to Bellevue Hospital.

Chapter X.—Sterility. By A. Reeves Jackson, A. M., M. D., Chicago, Professor of the Diseases of Women and of Clinical Gynecology, College of Physicians and Surgeons of Chicago; formerly Surgeon-in-Chief of the Woman's Hospital of the State of Illinois.

Chapter XI.—Diseases of the Vulva. By Matthew D. Mann, A. M., M. D., Buffalo, Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo; Gynecologist to the Buffalo General Hospital.

Chapter XII.—Inflammatory Diseases of the Uterus. By C. D. Palmer, M. D., Cincinnati, Professor of the Medical and Surgical Diseases of Women and Clinical Gynecology in the Medical College of Ohio, Cincinnati.

Chapter XIII.—Subinvolution of the Vagina and Uterus. By Thaddeus A. Reamy, A. M., M. D., Cincinnati, Professor of Obstetrics, Clinical Midwifery, and of the Diseases of Children, in the Medical College of Ohio; Gynecologist to the Good Samaritan Hospital, Cincinnati.

Chapter XIV.—Pelvic Peritonitis. By Richard B. Maury, M. D., Memphis, Fellow of the American Gynecological Society.

Chapter XV.—Pelvic Cellulitis. By Richard B. Maury, M. D., Memphis, Fellow of the American Gynecological Society.

Chapter XVI.—Pelvic Hæmatocle and Hæmatomata. By Ely Van De Warker, M. D., Syracuse, New York, Professor of Artistic Anatomy, University of Syracuse; Fellow of the American Gynecological Society.

This fine work is the first of a series of four that are to constitute the American System of Gynecology and Obstetrics. The opening article by Dr. Jenks is written in a very pleasing style. The sketch of the life of Dr. McDowell, and the account of his first ovariotomy; and the description of the grand discovery and illustrious work of J. Marion Sims, is very fascinating reading.

Dr. Garrigues gives a clear statement of what is known of the development of the female genitals. With the improved methods of study of the present day, many points but recently not understood, are having much light thrown upon them. In his article Dr. Garrigues gives the reader the result of these late investigations.

We are glad to see among the introductory sentences of Dr. Coe, on the anatomy of the pelvic organs, the following: "The general reader, who has hitherto been content to limit his knowledge of pelvic anatomy to the half-dozen introductory pages in a text-book on obstetrics or diseases of women, will be surprised, on looking deeper into the subject, not so much at the unsolved problems that confront him, as at the number of erroneous statements that have long received sanction of the highest authorities." Years ago human anatomy was regarded a fixed science, and until recently no one doubted the truth of statements made in early works, and makers of text-books have continued to hand down unchallenged much incorrect knowledge. Specialists who develop a subject must make personal investigations, and we are thankful to the American Gynecologist for anatomy of the female pelvic organs that is becoming more and more accurate. Space will not permit us to point out the many false ideas of this complex region of the body that within a few years have been corrected. It is, however, incumbent upon us to say that Dr. Coe has been most fortunate in the clear and comprehensive manner in which he has embodied the great mass of details that make up the present knowledge of these complicated structures.

In the chapter on malformations of the female genitals, Dr. Garrigues refers all malformations to one of two large classes. The one comprises those cases which are due to an excess o growth, which may be produced in three ways: a "mere *hyperplasia* or uncommon size of an organ, brought on by an increase in the number of constituent histological elements;" a "*hypertrophy*, by which is designated the condition in which the elements themselves are enlarged;" an excess characterized by a *multiplication* of organs. To the other, a much more numerous and important class, belong all those cases which are referable to an *arrest of development.*

In our present knowledge it is not clear why an organ should increase in size beyond the ordinary limits, or why there should be a larger number than usual. But in the light of embryological development, "what formerly was a chaotic mass of different freaks of nature," is now easily understood. Especially is this true of that group of malformations which are termed "hermaphroditism." In the discussion of this latter class, Dr. Garrigues shows from what is given in his previous chapter, that at the very earliest point of development every human individual is, in a certain sense, hermaphroditic and that a mixed development is not unlikely.

In the chapter on gynecological diagnosis, Dr. Grandin embodies much that is instructive and practical. He divides the means of obtaining the diagnosis of disease of the female generative organ into two divisions: rational history, and physical signs. By the former we obtain the "rational signs," and by the "physical signs," obtained by local examinations, we negative or confirm the diagnosis suggested by the former. The importance of proceeding systematically to obtain these signs is strongly urged, and the proper method pointed out, with a description of the necessary instruments and their uses.

The General Consideration of Gynecological Surgery covers Antiseptics, the use of opium, quinine, and ice, when to operate, preparatory treatment, operation table, anæsthetics, material for sutures, assistants, miscellaneous instruments, plastic operations, dilatation of the uterus, the curette, the vaginal tampon.

Dr. Skene limits himself to a general consideration of the selection and administration of the most reliable means to be employed in the management of the diseases which come under the care of the gynecologist. He considers the chief points in the management of functional derangements, and the general and local treatment of the organic diseases of the sexual organs, the uterus chiefly.

Electricity is regarded by Dr. Rockwell a tonic having a powerful influence over nutrition, and under certain conditions a most efficacious sedative.

Without making any further mention of each article, we want to say that the plan of having distinct topics written upon by various individuals, selected for their special qualifications, is eminently successful, and in no work is this more clearly shown than in the volume open before us.

A PRACTICAL TREATISE ON OBTSETRICS. Volume IV. Obstetric Operations. The Pathology of the Puerperium. By A. Charpentier, M. D., Paris. Illustrated with lithographic plates and wood engravings. This is also Volume IV of the "*Cyclopædia of Obstetrics and Gynæcology*" (twelve volumes), issued monthly during 1887. Price of the set $16.50. New York: William Wood & Company.

That part of this book devoted to *Obstetric Operations* treats the various subjects at length. The subject of version is plentifully illustrated with cuts that will aid in comprehending the manipulation. The prognosis of version is more unfavorable than is generally supposed. The author, from the gravity of the operation, prefers the forceps to version, and quotes Depane to express his position on the subject: "With my forceps I am perfectly at ease, for I am sure of never doing harm, while I never perform version without apprehensions."

The following rules of Pajot for podalic version are given: "*We must not think of version unless* the os is dilated or dilatable; the head must be above the brim; intact membranes are favorable." "*Version is indicated* whenever the life of the child or mother is in danger. When circumstances allow of choice, forceps should be preferred."

The discussion of the forceps occupies over one hundred pages. This chapter contains much valuable information.

The chapter on the induction of premature labor contains many tables from a study of which valuable conclusions are deducted. In deformed pelvis Wiener's conclusions are as follows: "Artificial labor induced in pelves of 3.3 to 2.7 inches compromises the mother more than spontaneous labor. The same, perhaps, does not hold true for the fœtus, but the advantage to the latter is more apparent than real, since the majority die rapidly after delivery." When the pelvis is normal, and the operation is called for by a complication of pregnancy, or a supervening disease, the prognosis should be guarded, "for although, at times, we may save the mother and infant, in other cases, it will be impossible to save the infant, endangered as it is always by the disease from which the mother is suffering; and often, by adding to the disease the shock of labor, the operation is simply an additional risk, and not only cannot save the mother, but will diminish her chances of survival. It should never be resorted to, therefore, except as a last resort, when we are deprived of all other therapeutic means."

The second part of the book on the pathology of the puerperium, first considers the pathogeny of puerperal fever. The author gives the various views, but supports the theory of Semmelweiss, who promulgates that "Puerperal fever must always be considered as a fever due to the absorption of a decomposed animal organic matter, and this absorption may result from *auto-infection*, or from *hetero-infection*. The views expressed by Schroeder, who is a strong advocate of the theory of Semmelweiss, are extensively quoted, but the author goes still further than Schroeder, and maintains that wounds and abrasions are not indispensable for infection. "The wound is not necessary, but only the presence of the infecting agent."

The discussion of puerperal fever is very full. We regard the information contained in this one volume worth the price of the whole set.

LITERARY MENTION.

BOOKS.

"Index-Catalogue of the Library of the Surgeon-General's Office, United States Army." Authors and Subjects. Volume VIII, Legier-Mediene (Naval). Washington: Government Printing Office, 1887.

"Insanity: Its Classification, Diagnosis, and Treatment. A Manual for Students and Practitioners of Medicine." By E. C. Spitzka, M. D., President of the New York Neurological Society, etc., etc. 8vo.: four hundred and twenty-three pages. Cloth, $2.75. New York: E. B. Treat, 771 Broadway, 1887.

"A Hand-Book of General and Operative Gynæcology (Volume II"). By Dr. H. Hegar and Dr. R. Kaltenbach. Two volumes. Illustrated. Being Volume VII, of the "Cyclopædia of Obstetrics and Gynæcology" (twelve volumes, price $16.50), issued monthly during 1887. New York: William Wood & Company.

"The Principles of Antiseptic Methods Applied to Obstetrical Practice." By Dr. Paul Bar, Accoucheur to, formerly Interne in, the Maternity Hospital, Paris, etc. Translated by Henry D. Fry, M. D. 8mo.: one hundred and seventy-five pages. Cloth, $1.75. Philadelphia: P. Blakiston, Son & Company, 1887.

"A Practical Treatise on the Diseases of the Hair and Scalp." By George Thomas Jackson, M. D., Instructor in Dermatology in the New York Polyclinic; Assistant Visiting Physician to the New York Skin and Cancer Hospital, etc., etc. 8vo.: three hundred and fifty-six pages. Cloth, $2.75. New York: E. B. Treat, 771 Broadway, 1887.

"Diseases of the Female Mammary Glands." By Th. Billroth, M. D., of Vienna, and New Growths of the Uterus, by A. Gusserow, M. D., of Berlin. Illustrated. These two works constitute Volume IX, of the "Cyclopædia of Obstetrics and Gynæcology" (twelve volumes, price $16.50), issued monthly during 1887. New York: William Wood & Company.

"The Curability of Insanity and the Individualized Treatment of the Insane." By John S. Butler, M. D., Hartford, Connecticut, late Physician and Superintendent of the Connecticut Retreat for the Insane; Member of the Connecticut State Board of Health, etc., etc. Royal 12mo.: fifty-nine pages. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1887.

"A Manual of the Physical Diagnosis of Thoracic Diseases." By E. Darwin Hudson, Junior, A. M., M. D., late Professor of General Medicine and Diseases of the Chest in the New York Polyclinic; Physician to Bellevue Hospital, etc. One volume. Octavo. One hundred and sixty-two pages. Nearly one hundred illustrations. Muslin. Price, $1.50. New York: William Wood & Company.

"Diarrhœa and Dysentery. Modern Views of their Pathology and Treatment." By Alonzo B. Palmer, M. D., LL. D., Professor of Pathology and Practice of Medicine and Clinical Medicine in the Department of Medicine and Surgery of the University of Michigan. The Physician's Leisure Library. Issued monthly. Number III. Single copies, twenty-five cents. Detroit: George S. Davis, 1887.

"Surgery: Its Theory and Practice." By William Johnson Walsham, F. R. C. S., Assistant Surgeon to Saint Bartholomew's Hospital; Surgeon in charge of the Orthopædic Department and Demonstrator of Practical Anatomy at Saint Bartholomew's Hospital; Surgeon to the Metropolitan Free Hostal, London, etc. With two hundred and thirty-six illustrations. Royal 12mo.: six hundred and fifty-five pages. Cloth, $3.00. Philadelphia: P. Blakiston, Son & Company, 1887.

"The Student's Guide to Diseases of the Eye." By Edward Nettleship, F. R. C. S., Ophthalmic Surgeon to Saint Thomas Hospital; Assistant Surgeon to the Royal London (Moorfields) Ophthalmic Hospital, etc., etc. Third American from the fourth English edition. With a Chapter on Examination for Color Perception. By William Thomson, M. D., Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. 8vo.: four hundred and seventy-five pages. Cloth, $2.00. Philadelphia: Lea Brothers & Company, 1887.

"The Modern Treatment of Diseases of the Heart: A Manual of Clinical Therapeutics." By Professor Dujardin-Beaumetz, Member of the Academy of Medicine, and of the Council of Hygiene and Salubriety of the Seine; Editor-in-Chief of the *Bulletin General de Therapeutique*, etc., etc. Translated from the fourth French edition. By E. P. Hurd, M. D., President of the Essex North District Medical Society, etc., etc. The Physician's Leisure Library. Issued monthly. Number II. Single copies, twenty-five cents. Detroit: George S. Davis, 1887.

"The Physician's Dose and Symptom Book: Containing the Doses and Uses of all the Principal Articles of the Materia Medica and Officinal Preparations, arranged in Alphabetical Order. Also, Table of Weights and Measures; Rules to Proportion the Doses of Medicine; Common Abbreviations used in Writing Prescriptions; Alphabetical List of Materia Medica; Preparations and Modes of Administration; List of Incompatibles; Hints on Prescription-Writing; Table of Poisons and Antidotes; Hints on Treatment; Table of Symptoms." By Joseph H. Wythe, M. D., Professor of Histology and Microscopy, Cooper Medical College, San Francisco; Author of "The Microscopist," etc. Seventeenth edition, completely rewritten and enlarged. Cloth, seventy-five cents. Philadelphia: P. Blakiston, Son & Company, Number 1012 Walnut street, 1887.

PAMPHLETS.

"Rational Medicine *Versus* Impiricism." By B. A. Watson, A. M., M. D. Reprinted from the *Virginia Medical Monthly*, August, 1887.

"The Relation of Educated Men to the State." An Oration by the Honorable Thomas W. Palmer, before the alumni of the University of Michigan. Semi-Centennial Celebration, June 29, 1887.

"Intubation of the Larynx. Papers read before the New York Academy of Medicine, in the stated meeting of June 2, 1887. A. Jacobi, M. D., President." By A. Jacobi, Joseph O'Dwyer, Francis Huber, Dillon Brown, W. P. Northrup, I. H. Hance, and A. Caille. Reprinted from the *Medical Record*, June 18, 25, and July 23, 1887. New York: Trow's Printing and Bookbinding Company, 1887.

"Oxygen as a Therapeutic Agent. Its Germicidal and Healing Qualities; Its Consequent Adaptability to the Treatment of Consumption and Pulmonary and Throat Troubles Generally; Its place in Surgery, with a Report of Twenty Cases Treated in the Practice of Drs. Rothwell." By P. D. Rothwell, M. D., Denver, Colorado. Reprinted from *Denver Medical Times*. Paper, $50. Denver, W. W. Rea, 1887.

"Anæmia." By Frederick P. Henry, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic; one of the Physicians of the Episcopal Hospital; one of the Physicians to the Philadelphia Hospital; Consulting Physician to the Home for Consumptives; Corresponding Member of the Royal Medical Academy of Rome, etc., etc. Reprinted from the *Polyclinic*. Half cloth, seventy-five cents. Philadelphia: P. Blakiston, Son & Company, 1887.

MEDICAL DIGEST.

DRUMINE.

Since hydrochlorate of cocaine met with universal acceptance as a local anæsthetic, its excessive high price, and insufficient supply at first, set chemists and experimenters at earnest work to find out other agents which might, at a lower cost, substitute that expensive salt. Various substances were tried, but none attained any degree of prominence, and subsequently its gradual decrease in price, and increase in production, for a time diminished the zeal of the workers.

Of late drumine, a new alkaloid obtained from the Euphorbia drummondi, by Dr. Reid, of Port German (Southern Australia), has been offered as possessing properties identical with those of the hydrochlorate of cocaine.

It is prepared from all parts of the plant by maceration in dilute muriatic acid, which, after being strained through cloth with expression, is treated with bicarbonate of sodium. Being duly washed, it appears in crystals of a colorless or gray hue, assuming the rhomboidal, acicular, or stellar forms. It is soluble in water, alcohol and chloroform, and its aqueous solutions are not precipitated by the salts of iron, cyanide of potassium, prussic acid, or bichloride of mercury. On the other hand, salicylic acid, iodide of potassium, iodide of mercury and potassium, and the alkalies in general, precipitate drumine. The physiological effect of Euphorbia drummondi, taken internally, vary according to the dose. In small doses it produces no appreciable effects, and even in toxic doses sheep may feed upon it for a long time with impunity, which is explained by Dr. Reid, by the non-absorption of the drug through paralysis of the gustatory and secretory nerves. However, when drumine is given to cats in toxic doses, it produces a paralysis of the limbs, probably due to the action of the alkaloid on the medullary chords, directly on the posterior, and reflexly on the anterior.

Topically, it is asserted by Dr. Reid that drumine has an anæthetic action identical with that of the salts of cocaine, with the advantage over them of not being preceded by a period of excitation.

The instillation of a few drops of a four per cent. solution in the eye of a cat, rendered the conjunctiva insensible to the contact of the finger, without causing dilatation of the pupil. The same solution applied to the nostrils and tongue produced complete anæsthesia of these organs; the latter, on the point of application, is scarcely able to perceive the bitter taste of sulphate of quinine.

Drumine is therefore indicated in nasal catarrh, spasmodic affections when the seat of the disease is accessible, cutaneous diseases with puritus, lumbago, neuralgia, burns and other painful affections.

Dr. Reid cites a case of sciatica, cured by two hypodemic injections with four drops of a ten per cent. solution of drumine. The experience of a European practitioner with this new alkaloid is by no means in accord with that of Dr. Reid. Several experiments, with specimens forwarded by him, have been made by Dr. Ogston, of Aberdeen, resulting in a total failure. It is presumed that the drug had deteriorated during its transportation from Australia. Further trials will probably establish the merits or demerits of this new alkaloid.—*Western Medical Reporter.*

THE USE AND ABUSE OF TEA.

A French observer has recently tabulated the evil results which in many cases follow the excessive use of what is now the favorite beverage of Teutonic and Sclavonic nations. The list is a formidable enumeration of neurotic and dyspeptic affections, which are not the less worthy of attention because they are mainly functional disorders, tending to the embittering of existence rather than the shortening of life. English clinical teachers are somewhat divided on this question. Some make light of the alleged evils of tea-drinking, and regard the prohibition of tea as, in many cases, merely a professional fad. Others teach that the mischief, of which they admit the existence, is due less to excessive use of tea than to the omission from the regular dietary of the really nutritive and sustaining elements. A third class regard tea-drinking as an evil almost comparable to alcoholism.

Tea has won its way to favor among civilized nations mainly, it would seem, as an agreeable nervine stimulant. As Sir William Roberts points out, in his interesting lectures upon dietetics, a craving for nerve-stimulation is one of the most marked characteristics of advanced civilization, although savage man is by no means devoid of this universal human instinct. The stimulants in common use are tea, coffee, and alcohol—not to mention such agents as opium or haschish, which are perhaps less stimulant than narcotic. Of this group, tea and coffee are favorites, as they suit the taste of both sexes; and their beneficial effects undoubtedly far outweigh the evils which occasionally spring from their abuse.

Tea is an agreeable cerebral stimulant, quickening intellectual operations, removing headache and fatigue, and promoting cheerfulness and a sense of well-being. It is known to all English-speaking people as the "cup that cheers but not inebriates"; and it has long been a favorite with students, literary men, and others engaged chiefly in brain-work. Tea is also a mild sudorific, and is largely consumed in hot countries, especially our Australian colonies, where it is found to exercise a cooling influence, after the preliminary effect due to the imbibition of a hot fluid has passed off. The influence of tea upon the digestive tract has not been so definitely made out; but the most recent observations seem to show that, while it somewhat retards primary digestion, it aids the absorption and metabolism of the food-elements. From such physiological facts, it is clear that tea is chiefly of service during or after physical or intellectual effort, and at the time when absorption of the products of primary digestion is in process. It cannot be too strongly asserted that tea is not in any exact sense a true food, and that its nutritive value, in itself, is practically naught.

As might be conjectured from the nature of the physiological action of tea, the effects of its abuse fall chiefly on the nervous and digestive systems. Nervous irritability, palpitation, insomnia, and sense of brain-fatigue are among the most prominent of the neurotic symptoms; and, although it is unquestionable that these symptoms are often etiologically connected with other sources of nervous disturbance as well as tea-drinking, it is not less clear that they are greatly aggravated by the excessive use of tea. The digestive symptoms are impairment of the appetite, pain and flatulence during the process of digestion, and defective intestinal action—the symptoms, in fact, of one of the varieties of atonic dyspepsia. How far these symptoms are due to the thein contained in the tea, and how far to its tannin, is a question. Sir William Roberts has shown that the most rapid infusion does not prevent the dissolving out of a large proportion of the tannin, and we are disposed to conjecture that the digestive symptoms may to a large degree be safely attributed, not to any chemical action, but to the same cause which produces the neurotic disturbance, namely, the thein.

The sufferers from excessive tea-drinking may be grouped into three class.

First, there is the large class of pure brain-workers, who speedily discover that, while alcohol is pernicious to them, tea affords the stimulus which they desire. They indulge in it without fear of mischief, and often to an unlimited extent. Dr. Johnson's tea-drinking was proverbial, and many distinguished writers could tell a similar tale. After a time, the neurotic symptoms enumerated above begin to make their appearance, and, in many cases, do much to impair temper, and to limit the capacity for sustained intellectual effort.

Secondly, there is a large class of women of the better classes who, beginning with afternoon tea, often end by using their favorite stimulant in the intervals between all the meals of the day, and as often as the humor takes them. The result is that appetite becomes impaired, and the prostration due to insufficient nourishment is combated with more potations of the ever welcome stimulant, until the vicious circle is well established.

Thirdly, in all our large manufacturing towns there are numbers of factory operatives, especially women, who, finding it difficult to provide a cheap and appetizing mid-day meal, fly to the teapot, and do a large amount of severe physical labor on this miserable dietary. It is most important to impress upon this class, who are usually profoundly ignorant of everything concerning health and diet, that tea is not food, and that the delusive sense of satisfaction which it bestows is a dangerous snare.

In addition to the above classes, there is a small group of persons to whom tea seems a positive poison. We know that idiosyncrasy accounts for the most extraordinary departures from the normal rule in matters of diet or the action of medicine; and the number of persons whose idiosyncrasy includes an intolerance of tea is considerable enough to make the subject worthy of professional attention.

Sufferers from the abuse of tea should abstain from its use, and substitute either coffee or cocoa. It will be found that many of those who are unfavorably affected by tea, are equally susceptible to the action of coffee, but this is by no means universally true, and the substitution can often be made with decided advantage. Cocoa suits almost all cases, and, whatever may be its deficiencies on the score of palatability, it is a genuine food, and its modern preparations are becoming more and more elegant and pleasing to the taste.—*British Medical Journal.*

IODIDE OF POTASSIUM IN PSORIASIS.

Dr. A. Haslund, physician in chief of the Copenhagen General Hospital, in an exhaustive paper on this subject contributed to the *Vierteljahresschrift fur Dermatologie und Syphilis*, gives his experience. Fifteen years ago Hebra had condemned the iodine and bromine preparations as entirely useless in the treatment of psoriasis. The only internal medicine of any value, in this disease, was arsenic, and is to-day almost universally employed. Dr. Haslund has followed the iodide of potassium treatment in fifty cases and reports his results in a detailed manner. Forty cases were cured, and of these twenty-four were men, three women, six boys and seven girls. The length of treatment lasted in these cases from seventeen days to fifteen weeks. The amount of the drug taken in single cases varied from one hundred and sixty grammes (five ounces) to one thousand five hundred and twenty grammes (forty-seven and five-tenths ounces). The rule which has been followed in administering the drug is as follows: A solution of iodide of potassium in water, one in twenty, is ordered and a tablespoonful of this given four times daily. Small children are given a solution of one-half of this strength to begin with. In two or three days six doses are given, in a couple of days later eight doses, and so on, until the patient takes twelve tablespoonfuls a day. After this the solution is increased, every second or third day, by making it one one-hundredth stronger. The only serious case of iodism observed was in a man who was thirty-seven years old. The author concludes that iodide of potassium, in large doses, is a remedy possessed of tolerable certainty to heal the eruption of psoriasis, and there is no remedy with which we are acquainted, which, administered internally, will produce results in such a short time. In regard to relapses the author says nothing of a positive nature, as he has not had a sufficient length of time to observe the cases he has treated.—*Saint Louis Medical and Surgical Journal.*

PHYSICIANS AND SPIRITUALISM.

Of all people calculated upon to be influenced by things uncanny and immaterial, perhaps the doctor is the least impressionable. Owing to the channel in which his thoughts are cast, both by his studies and the character of his after life, he is not very liable to put much credence in statements made to him which are to be believed only on faith, nor accept what is strange but true, except on extremely conclusive proof. It was probably with this in mind that the Seybert Commission, appointed some three years ago to investigate the subject of spiritualism, had the names of a number of our most prominent physicians placed upon it; among them Dr. William Pepper, Dr. Joseph Leidy, Dr. Geo. A. Kœnig, Dr. S. Weir Mitchell and others. The report of the Commission has now been made public, and, as was expected, is not at all favorable to spiritualism. That this result is not due to previous bias, can be seen by reading their first installment; throughout it there can be seen that attempt to be perfectly fair and just which would be made by fair-minded men who were seeking to solve some scientific question, and not striving to upset some theory antagonistic to their personal interest. The commission gave all advantage to the mediums who were to prove the truth of their doctrine to it, submitted to all their conditions, and even went far beyond that point where many, investigating for themselves, would have decidedly said that it was all a grand humbug.

The conclusions arrived at by the commission all point to a shrewd recognition of the gullibility of people at large by the mediums, together with a lot of first class legerdemain, which can be seen at any time upon the payment of a half a dollar.

The fairness and accuracy with which all the details of their report are presented, would convince nearly all of the falsity of spiritualistic claims, but there is a certain class of our population which seems to require for its existence something which is beyond explanation, and which must be taken on faith, and to these the report will no doubt pass as an exhibition of stubborn prejudice.

Slate-writing, one of the strongholds of the spiritualistic art, was obtained in great quantities, but always under such suspicious circumstances that the fairness of the procedure could not but be questioned. It was finally dropped by the commission, owing to one of its number bringing a small mirror which he held on his knee, thus reflecting to his eye the slate pencil vigorously traveling over the slate under the table, propelled by the very material hand of the medium herself, and not that of departed spirits. In all the cases in which something supernatural was to be done, a mass of scenic and other arrangements was made use of, which was no greater than any juggler would require to perform feats even stranger than those. As long as our spirits fail to do anything which cannot be done by our prestidigitateurs, and work on the basis of darkened rooms and closed cabinets, so long will the fair-minded and inquiring mind fail to accept their teachings.—*Weekly Medical Review.*

THE LOCAL DISTRIBUTION OF PHTHISICAL LESIONS.

In a memoir upon the pathology of pulmonary diseases (*Zeitschrift f. Klin. Med.*, abstracted by Sahli in *Fortschritte der Medicin*, Number XI, 1887), Dr. A. Hanau suggests that the reason for the preference of the apex of the lung for the initial lesion of phthisis is to be found in the comparatively weaker expiratory power of this part of the organ. In support of this he cites the frequency with which anthracotic and chalicotic processes are to be met with at the apex, or a short distance below, corresponding to the sites of tubercular foci. Being unsupported, the apex of the lung can be fully expanded by inspiration, but it is less under the influence of expiratory forces than the lower parts of the lung. As a consequence, in forced breathing the air is very likely to stagnate in the apex; and, as Mendelsohn showed with respect to emphysema, there may even be a reflux of air from the normally acting lower parts of the lung into the upper. The comparative immunity from tubercular phthisis enjoyed by the subjects of spinal curvature, by those whose lungs have become cirrhotic, as coal miners, or the emphysematous, may in each case be attributed to defective power of inspiration possessed by the apex or the whole lung in such conditions. The selection of the middle lobe and lower part of the upper lobe for the occurrence of secondary foci due to the aspiration of the contents of cavities which have escaped into the bronchi is also explained. Usually the areas of broncho-pneumonia arising from aspiration of noxious matter are to be found in the lower and posterior parts of the lung. This is due to the dorsal decubitus of most of the patients in whom this complication supervenes. But it is otherwise in phthisis when the subject is not confined to bed, for the regions next to be involved to the apex, and infected secondarily from it by means of aspiration, are the middle lobe and contiguous part of the upper lobe. These regions are the most liable to be fully distended in coughing, and the products of the apical vomicæ will be more readily pressed in their direction by the backward current of air. Hanau also ascribes the frequently rapid extension of phthisis in women after childbirth to the aspiration of the contents of cavities into previously healthy parts of the lungs following on the extraordinary respiratory effects made during parturition. Aspiration as a factor in the dissemination of tubercular lesions is not perhaps as fully recognized as it should be, but it certainly serves to explain the matter in a plausible way, and is in absolute harmony with the doctrine of the local infectivity of tubercular products, which is so admirably illustrated in the distribution of the lesions of uro-genital tuberculosis.—*London Lancet.*

THERAPEUTIC PROGRESS.

Iodol Pastilles.—Iodol, one grain; glycerine, one minim; glycogelatin, eighteen grains. These are very useful for chronic pharyngeal conditions, and are much preferable to iodoform pastilles.

Salol.—Dr. Aschenbach, of Corfu, states that salol is a most useful remedy in sciatica. He took a dose of eight grains each evening, and double the quantity on going to bed; he remained free from pain during the whole night.

PENCILS OF IODOFORM.—Poinsot employs two kinds: the soft variety being prepared from equal parts of finely powdered iodoform and gelatin, while the hard pencils are composed of equal parts of iodoform and cocoa butter.

BERATE OF AMMONIUM FOR PHTHISIS.—Professor Lashkevich has found the berate of ammonium of great value in the treatment of phthisis, producing a marked effect on the expectoration and in some cases diminishing pyrexia in the early stages of the disease. The dose given was five grains three times a day, combined with codeine, henbane or other sedative.

INFUSION OF COFFEE, made by percolation, from one-half ounce of coffee with sufficient boiling water to yield three fluid ounces, was found to contain forty-five grains of extractive, including two and thirty-six-hundredths grains of caffeine, about twelve per cent. of the latter remaining in the grounds. A cup of coffee made in this way may be expected to have a marked effect as a stimulant.

CARBOLIZED OIL IN SCARLET FEVER.—Mr. John Brown, Medical Officer of Health, England, in a paper, testifies to the prophylactic advantages attending the early and continuous inunction of carbolized oil in cases of scarlet fever. The oil contains five per cent. of pure carbolic acid, and as soon as the rash is out it is applied all over the body, excepting the face, for which olive oil is used. The inunction is used twice a day, with a warm bath each night. The treatment is continued until it may be expected that desquamation is complete.

SOLUTION OF CARBON BISULPHATE in typhoid fever is recommended by Dr. Dujardin-Beaumetz, to be prepared as follows:

Bisulphide of carbon	25 gm.
Water	100 gm.
Oil of peppermint	30 drops.

This is put into a bottle capable of holding seven hundred grammes (twenty-two ounces), well agitated and then allowed to settle. Of the clear watery solution from eight to twelve tablespoonfuls are given during the day, each dose being mixed with a half tumblerful of aromatic water or milk. A quantity of water should be added to the bottle equal to the solution taken by the patient.

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ORIGINAL ARTICLES.

DISEASES OF THE TONSILS IN CHILDHOOD.

BY J. M. KEATING, M. D., PHILADELPHIA, PENNSYLVANIA.

TONSILLITIS.

Acute inflammation of the tonsil is most commonly met with in young persons and is generally brought about by exposure especially to cold and damp.

The disease usually lasts but a few days, possibly not more than a week, terminating in suppuration, gradual resolution, or chronic enlargement. It is accompanied by a marked fever, sometimes the temperature rising quite suddenly; restlessness and difficult deglutition; there may be difficulty in respiration and sonorous breathing. The child will cry out suddenly and exhibit all the phenomena usually recognized as belonging to earache, and if the child is older it will complain of pain radiating towards the ear, inability to swallow, will resist any attempt to examine its throat or any pressure upon the angle of the jaw; slight enlargement will be noted externally, especially marked on one side. Examining the throat it will be noticed that either both tonsils are affected, together with the mucous membrane of the fauces, or more frequently one is larger than the other appearing round and projecting towards and beyond the median line. Upon its surface will be found a tenacious mucous discharge with yellow points resembling a membrane, but this can be readily detached, showing the enlarged follicles beneath.

The cases of non-diphtheritic croupous tonsillitis are frequently mistaken for diphtheria, and marvelous cures reported.

The fauces are œdematous, as is also the uvula, and frequently the latter is attached to the tonsil by this tenacious mucus.

It is rare that both tonsils are equally enlarged at the same time.

The tongue is coated with a heavy yellowish coating, the salivary glands, especially the parotid, secrete a tenacious viscid material which aids in the obstruction.

The patient usually snores during sleep, the voice is nasal, comes thick, and frequently the attempt at swallowing liquid food—it is impossible at this stage that the child should attempt solids—is followed by regurgitation through the nose.

In two or three days the tonsil previously affected gradually subsides while the opposite one is reaching the climax of its severity. As a rule resolution will gradually take place under proper treatment. Should, however, suppuration follow, as it very frequently does, the abscess of the tonsil may be noted by high temperature, possibly in older children a chill, throbbing and severe pain in the ear.

If inflammation should extend up into the Eustachian tube, deafness will follow, or the pressure due to congestion may give rise to deafness simply from mechanical obstruction. An abscess may burst spontaneously, and after the evacuation of pus, convalescence is speedy. In children the rupture of the abscess may follow coughing or the gagging from nausea, or that produced by the examination of the throat, and as a rule such a termination is followed by no serious consequences, though in the adult we know that suppuration may be deep and cause serious damage to contiguous blood-vessels. Should both tonsils become enlarged at the same time, incision or puncture will give immediate relief from the symptoms of suffocation that have preceded it.

It may be noted that this affection is most common in older children. The symptoms are so acute as to preclude the possibility of diphtheria, though, as we have noted in studying diphtheria, that enlargement of the tonsil with the presence of pseudo-membrane is by no means an uncommon complication in that affection. Still the absence of membrane upon the anterior arches, the presence of but a slight inflammation, as far as external appearances go, of the glands behind the angle of the jaw and the connective tissue, are sufficiently diagnostic in themselves, taken with the fact that the deposit is very easily detached, and the round red body of the tonsil, with its enlarged follicles, is found beneath the coated surface.

Treatment.—Possibly the case may have gone on for some days before attention has been called to it; that is, there may have been langour, loss of appetite, pains in the bones; in older children slight difficulty in swallowing before attention has been directed to the throat as the cause of trouble, when suddenly inflammatory symptoms will set in, as above described. Should the case be seen at an earlier period, an attempt may be made to abort the attack, though this is rarely successful. It is well to have the child placed in bed, having previously administered a hot foot-bath containing mustard. The child should be wrapped in a blanket, the lower portion of it extending over a tub of warm water, to which should be added occasionally some hot water. The child's feet should be kept in this for at least ten minutes. After this, the little patient should either wear a pair of stockings, or what is probably better, should have long Canton flannel night-drawers, with the legs made a foot or more longer than necessary and buttoned at the extremity. The child should then be wrapped up warm and given the following fever mixture:

℞.	Spts. ætheris nitris	f ʒi.
	Liq. potass. citratis	f ℥ss.
	Liq. ammon. acetatis	f ʒiii.

Put in a tumblerful of water.

To this may be added three drops of the tincture of the aconite root, and the little patient should have of this, about a tablespoonful every hour or even more frequently during the night should it be restless or complain of pain. It would be well also in this earlier stage to use externally a wet handkerchief wrung out, the water to be of the ordinary temperature of the room, over which should be placed a silk one or a piece of oiled silk, and this frequently changed during the night if necessary. It will have the effect of diminishing the fever and relieving very shortly the throat congestion. Possibly if the tongue seems very much coated it would be well to administer a laxative and for this purpose a half grain of calomel may be administered, or it would be better to give it in the twelfth of a grain dose every hour until a half grain has been given, rubbed up with a little sugar of milk, and two grains of bicarbonate of soda with each powder.

Almost from the very first the presence of secretion will be noticed more or less upon the tonsils and as the termination of the case may be a doubtful one, it is well as early as possible to apply locally to the throat medication which will prevent systemic poisoning should diphtheria supervene. Diphtheria is an affection totally distinct in its symptoms from all other throat troubles, considering it is a blood poisoning of the most virulent type, nevertheless, it is a disease often insiduous in its onset, and it complicates many other affections which are of a purely local character and we should always be on the lookout for it.

A careful examination of the child's throat should be made from the very onset. If you are called to see the case at night, and in my own experience, one usually is, for it is generally about bed-time that the children complain the most, and the parents get most uneasy. It is well to begin that portion of the examination first which requires greatest accuracy; do not enter the room abruptly, make friends with your little patient, count the pulse, explain to the mother how you wish the temperature taken. Arrange your thermometer, hand it to the mother and allow her to place it under your direction. If the child is old enough take the temperature in the mouth; should the child be young, take it in the rectum. Do this before you examine the throat, as the latter examination will surely excite it, and the probability is, that it will cause a rise in temperature, or at least interfere with your taking it. In order to examine the throat, bring the child near the light, adopt the axiom of surgery "to see all you can," let the mother rest the child's head upon her breast, fixing it back against her arm and hold the hands down so that they will not interfere with your examination, then allow the spoon, or whatever you use to depress the tongue, to quickly be inserted, slide it above along the roof of the mouth as far as the anterior half arches, then by a sudden downward pressure you will cause the child to open its mouth and gag and you will get a good view of the part. It is well for you before this, judging from the character of the breathing of the child, to have present a solution either of nitrate of silver, ten grains to the ounce, or chlorate of potash (one drachm) and tincture of chloride of iron (a half ounce) with glycerine (one and a half ounces). This will save an immense amount of trouble, as you can very easily see at a glance what is required, and should the deposit be found, the local treatment would be advisable. Should the tonsil be very much enlarged, the disease evidently having existed some time, warm applications or poultices will probably give more relief and possibly hasten suppuration, and in such cases the advancement of the inflammation towards suppuration will be made evident by the inability of the child to open the mouth, a great difficulty in swallowing and the accumulations of the tenacious mucus which frequently causes gagging and will eventually bring on a fit of coughing or produce nausea, which will finally cause rupture from a spasmodic contraction of the throat. Guaiacum has been recommended for this disease, "especially, when herpetic inflammation of the follicles is marked out of proportion to the deeper interstitial inflammation of the gland, troches made by Hancock, of Baltimore, giving a small piece occasionally."

In addition to the use of the hot water applications to the throat, which should consist of cloths wrung out in warm water with a little laudanum sprinkled upon them covered with oiled silk, it is well to give an inhalation of steam. In hospital practice, this is easily managed by turning steam into the room. In private practice it is a difficult matter to so fill the room with vapor, so a hand atomizer with some alkaline solution (as Dobell's) may be frequently used, or the child made to inhale the vapor of slacking lime. It has been recommended to give freely saline purgatives in this condition. This I think would be rather risky in many cases, if the child be feeble, especially so in city practice, but the laxative use of calomel and soda, or a dose of castor oil, cannot possibly do harm.

Some children with tonsillitis and various other inflammations of the throat will only take food when cold, and of course, in such an event as this, only food which is fluid and unirritating, and in such cases cracked ice can be frequently given, or if the child shows any degree of debility or diphtheritic infection, or should the disease be a complication of scarlatina, frozen meat jellies will serve the purpose of supplying the cold as well as nourishment. Milk should be used frequently, and the various recommendations in text-books under the chapter on diet should be noted in this connection.

It is well to give quinine as early as possible. The quinine can be suspended in some syrup, elixir, or wrapped in a wafer, if the child is able to swallow it or be given by suppository. Some authorities recommend a very free administration of quinine. My own experience is that this should not be a matter of routine. Where there is acute enlargement of the tonsils from inflammation, and consequently much pressure, there is apt to be some cerebral congestion accompanying it; and certainly if we can draw conclusions from practice with adults and especially from our own sensations under the same circumstances, quinine in large enough doses to prevent suppuration would only increase the cerebral symptoms. I would certainly much prefer waiting until the fever somewhat subsides, relying upon the application of the cold compresses to the throat and hot foot bath with the fever mixture or possibly, doses of bromide of potash or minute doses of Dover's powder to bring on perspiration and allay nervous irritability, before having recourse to quinine, in large doses. Chlorate of potash is most decidedly of service in such cases, both locally and internally. I would give it in half-grain doses with honey and glycerine every second hour. In this way it will adhere to the throat and at the same time produce its effect. As soon as the temperature abates it will be necessary to give iron, especially the tincture of the chloride, in full doses, depending upon the age of the patient. It is almost specific in such cases in preventing suppuration and the anæmia noted in this disease.

An excellent way of administering it, is with dilute phosphoric acid, syrup of lemon and glycerine. It should be given not too diluted, so as to act as an astringent upon the throat in its passage downward. In convalescence milk punch should be added to the dietary. There are few acute diseases that are followed by such a degree of anæmia as tonsillitis, and it may be necessary, especially should suppuration occur, to place the patient upon cod-liver oil and arsenic before complete recovery will take place. It is rare in this disease that any necessity exists for puncturing the tonsils in young children, and, indeed, it requires considerable care and dexterity to do this with the bistoury. The tendency is towards rupture, and this usually takes place during some strain in gagging, either from the introduction of the spatula or from the cough brought on by the accumulation of mucus. All matters vomited should be examined to see whether they contain pus.

Frequently the tonsil can be affected by putting the finger down the throat and pressing gently forward and cause gagging at the same time. After this an astringent gargle, if the child is old enough, will rapidly reduce the size.

FOLLICULAR CATARRH.

This disease is either accompanied by pharyngitis or it may arise spontaneously, the result of sudden exposure to a child who is strumous. The lubricating fluid which is secreted by the tonsils becomes altered in character either by simple catarrh, or we may have pressure from interstitial thickening and thus check the outflow of this secretion. Whitish patches will appear on the surface, and this disease, suppurative in character, is limited and evidently from its appearance due to follicular disease. Its diagnosis is simple.

Treatment.—In such cases the treatment should be local and constitutional. Guaiacum acts most happily in this condition, given as before noted, in troches. It is about the only way children will take it. Chlorate of potash is also very valuable as far as local treatment is concerned, though I would much prefer using the tincture of iron dilute applied with a camel's-hair pencil to the throat and giving constitutional remedies such as the oxide of iron, arsenic, and cod-liver oil. This affection, like hypertrophy of the tonsils, seems to have a hereditary tendency in certain families.. I might also say the same of tonsillitis, though to a less extent.

HYPERTROPHY.

Chronic enlargement of the tonsil may result at times from acute tonsillitis though in such cases, it is usually moderate in extent. This result is more usual in older children.

There seems to be a hereditary tendency towards this condition. It is found most frequently in diatheses recognized as scrofulous or rickety, again frequently the result of follicular catarrh which has not been checked. Meigs and Pepper note that they have observed enlargement of the tonsils in apparently sound constitutions. This enlargement may begin very gradually and not make itself apparent for a year or two, but usually affects both tonsils, though not to the same extent. In appearance the tonsils may be smooth and round, projecting into the fauces, or else, as we have noted above, the gradual increase in the interstitial tissues causing a permanent thickening of these structures, distending the follicles, producing an increase in size of the gland structure which may become extremely hard, but usually elastic to the touch, and finally the points of the follicles may be discharged, leaving a rough surface and numerous excavation pits.

The pressure exerted by these enlarged glands will, of course, depend upon their size. There will be interference in breathing especially at night, with snoring, night terrors and occasional husky voice, or possibly respiration may be affected, even cough produced. In children who are rickety and, as has been noted, this is usually found in the strumous and rickety diatheses, the difficulty in breathing might finally result in deformity of the thorax and in some of those conditions which are described under the chapters on chronic nasal catarrh in children. Meigs and Pepper doubt the production of chicken-breast deformity as due to tonsillar enlargement, as they say they have noted cases where this deformity exists without any tonsillar hypertrophy and attribute laryngismus stridulous, the ill-developed features, the deformed thorax and enlarged tonsils to one common cause.

The pressure will frequently interfere with hearing and will give rise to interference in the circulation. A moderate chronic hypertrophy of the tonsil, *per se*, is probably of little consequence, but it is usually the seat of inflammatory attacks more or less severe, is a weak point as it were, liable to give annoyance upon the least provocation, and, indeed, the base of quite serious trouble should scarlatina, diphtheria, or severe angina be super-imposed.

Treatment.—Should the patient be fortunate enough by careful management, to withstand the various diseases which affect children who are rickety or scrofulous, a moderate form of hypertrophy may give rise to no special trouble, and the proper administration of tonics and generous diet, with fresh air and exercise, may gradually reduce the size of the tonsil; in fact, what would be an enlarged tonsil in childhood would be a moderate-sized one in the adult, and in that way, children are said to outgrow it.

The medical treatment in this case is naturally slow, and requires considerable patience. It consists of alteratives, and possibly an entire change in the mode of life. Should several children in a family be affected to a great degree, if circumstances will permit, the family should change the mode of life and live as much as possible in the fresh air of the country or, even better, at the sea-side. Iodine, arsenic, cod-liver oil, and iron should form the basis of the medical treatment. It is well in these cases to keep the patient as long as possible on a well prepared emulsion of cod-liver oil, containing either a syrup of the iodide of iron, Fowler's solution of arsenic, or Lugol's solution of iodine. The child should have a bath daily, or sponging with cold salt water, and be briskly rubbed afterwards into a glow. The diet should consist of well prepared oatmeal gruel, rare meats and well-cooked vegetables, and a plentiful supply of good, rich milk; especially is this the case should the child be rickety, and in addition to this treatment the lacto-phosphate of lime should be given daily.

In rickety children it is well to bear in mind the importance of some form of phosphorus, either liquor acid phosphoric comp., Horsford's acid phosphates, Parrish's chemical food, the syrup of hypophosphates, or hypophosphites. The phosphates of iron, quinia and strychnia are valuable when the appetite fails. In this case it is well to apply some preparation of iodine externally behind the angle of the jaw; either apply compound iodine ointment or an ointment of the iodide of ammonium. The muriate of ammonia has been recommended in all these cases. In interstitial hypertrophy also the bromides of ammonium and potassium may be given internally.

As regards the local treatment of the tonsils, much difference of opinion seems to exist. In older children and in adults it has been the custom where this hyperthrophy is great to ablate the tonsil, some advise almost an entire ablation, others simply slicing off either upper surfaces. At the present day the actual cautery, especially the galvano-cautery, has been used for this purpose, and in my own experience where the condition is one of long standing, it seems to be followed by good results.

Meigs and Pepper recommend the injection of iodine in dilute solution, three to five drops into the gland very gently about once a week, according to the effect produced in the children old enough for this treatment. The application of nitrate of silver, especially the solid stick to the surface, laid lightly, has also been of advantage, or a solution of nitrate of silver, ten grains to the ounce; Lugol's solution diluted with two to four parts of water, applied locally, is also recommended by them, also the application of Lugol's solution with glycerine every other day.

CLINICAL LECTURES.

ENLARGEMENT OF THE HEART.—TUBERCULAR TROUBLE.

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REPORTED FOR THE PHYSICIAN AND SURGEON BY SPECIAL STENOGRAPHER.

GENTLEMEN: Our first patient, Mr. P., twenty-three years of age, was born in Pennsylvania, and at present is a resident of Chicago. Antecedent to the present illness, his general health always good; sisters and brothers were all healthy, but mother died of pneumonia at the age of thirty-eight. His habits have not been good; hygienic surroundings excellent; food and clothing good. He ran across a viaduct and very soon after was seized with spitting of blood, dark at first, afterwards red. He then grew weaker and weaker, until he could not work, and has not worked since. He had a cough, which became less, after taking some cough medicine for a little while. You will observe he is somewhat emaciated; his skin is normal in color; pulse a little quick, full, and somewhat soft; temperature, 99 ; respiratory movements, 16 to 17; tongue normal in size and color, not coated. He has no pain at present, but a little at times in the region of the heart. The apex is found to beat in the seventh intercostal space; no murmurs with the first sound; first and second sounds at the base normal; impulse is increased below; dullness is more marked over the pericardium than usual. There is greater dilatation of the right than the left lung; marked dullness is heard over the left apex. The heart is evidently enlarged. There are no valvular lesions, because the sounds are normal; but we get over the left lung some signs of a deposit with bronchial *rales*. The physical signs are those of enlarged heart, with a little deposit of some kind in the left lung, giving us bronchitis.

With reference to bronchitis, I desire to say, you almost always find in cases of lung trouble bronchial rales in the affected lung. If you have a tubercular deposit you will get it in the region where the deposit is. Catarrhal bronchitis, as you doubtless know, involves both lungs alike. It is a bilateral disease; it is not local. If it is local, look out, there must be some local cause for its development. We have not only bronchial rales on that side (the left), but a loss of motion; a little roughening of the vesicular murmur. With this brief and meagre history, I do not see how we can make a diagnosis other than that of enlarged heart. It may be a matter of injustice to the patient, but I must say this disease was undoubtedly brought about by his bad habits. We do not get a murmur that indicates valvular lesion of any kind.

We are informed also, that along with the patient's cough medicine there was added five drops of digitalis to keep the heart stable. Now, we know that digitalis is a good cardiac stimulant, and where we have dilatation to such an extent that the organ is considerably weakened in consequence, I would not hesitate to give it for the purpose of strengthening the heart, but in this case I am disposed to put the patient (knowing he has considerable bronchitis) on tonics, such as quinine, iron and strychnine, before meals, and give him a cough medicine of some kind after meals and at bedtime.

Michael D., aged forty-five years, Irishman, laborer, married; health generally been good; no hereditary predisposition; temperate in habits; hygienic surroundings have been fair. June 1, got wet feet while working; had a chill June 9, and has had chills frequently since, which have occurred recently, almost daily. About six weeks ago noticed sputum was streaked with blood; lost from twelve to fourteen pounds of flesh; has chills in the fore part of the night, followed by sweating; has taken three to five grain pills of quinine.

You notice the patient is emaciated; his face has a dull expression; skin normal in color; pulse normal, with temperature, 100°. Respirations, 22 to 23; tongue clean, but slightly coated; pain in the right side.

Tubercular trouble generally selects the apex of the lungs. You find it begins there in probably ninety-nine out of every one hundred cases. We have impairment of the respiratory murmur; the patient is considerably emaciated; he has cough. We have a large number of deaths every year in this city from tubercular troubles. I do not suppose we have any more than the northern cities. We all know we have bad weather in Chicago from January to June; that is when these cases are affected badly.

We have a fatality every year of three to four millions going that way. About thirty years ago I began chest treatment, and to hold clinics. We commenced then with cod-liver oil, and although I have kept pace with the literature on the treatement of these affections, I do not believe we have got anything much better than what we commenced with. I have apparatuses and all the equipments adapted for the new treatment of pulmonary troubles (of gaseous injections per rectum, etc.), and I must confess I have not very much faith in it; and hence, I fail to see the utility of giving this man a gaseous injection. I would first build up his digestive organs; try and get him to eat good food. We will give him for his night sweats, sixtieth to a hundredth grain of atropia at bedtime; we may also begin with three grains of quinine, lemon juice, and three teaspoonfuls of water, enough as an appetizer, at bedtime to break up his chills, and pyrogallic acid and quinine during the day.

After continuing this for a time, we might then give him a nourishing tonic, such as cod-liver oil.

ORIGINAL TRANSLATIONS.

FRENCH LITERATURE.

TRANSLATED BY C. J. MINER, ANN ARBOR, MICHIGAN.

TUBERCULOSIS OF THE JOINTS.

Dr. Kölischer has just described a new method of treatment of localized tuberculosis. The new theory is based on the following considerations. Firstly, he tried to produce a calcification of the tuberculous seats, analagous to the spontaneous calcification that takes place in the lungs, by the injection into the fungus masses of a sufficient quantity of the salts of lime. Secondly, he sought to establish by these injections a process of acute inflammatory irritation in the tuberculous granulations and to produce in this manner a cicatrization of the tuberculous nodules.

In the experiments he tried in the clinic of Professor Albert he used parenchymatous injections of solutions of the phosphate of lime, and obtained very favorable results in about six weeks.

One of the cases that he treated by this method, and that he showed in one of the recent meetings of the Royal Imperial Medical Society, was that of a boy aged four years affected with fungus granulations (tuberculous) of the knee-joint, with very grave symptoms such as ankylosis, lateral mobility, swelling and pain. A cessation of the morbid processes was obtained after a treatment of five weeks.

Among the other cases he had treated by this method should be mentioned two cases of fungus granulations of the elbow-joint, in which the patients suffered ankylosis, followed by swelling and great pain; these symptoms also accompanied by fever. After a treatment of six weeks the joints became normal and complete mobility was obtained.

Among these cases Dr. Kölischer showed to the Society a case of calcified caries of the hand and the cure of a tibio-tarsal fungosity, in which was also observed a circumscribed necrosis of the bone.

In the first experiments Dr. Kölischer used a solution of the chlorate of lime for the parenchymatous injections, but afterwards, following the advice of Dr. Freund, he used a solution of the phosphate of lime with a surplus of phosphoric acid.

The injections are accompanied by a serious reaction, especially when the chlorate of lime was used. The fungus masses opened and healed in a short time, and when there was a bit of necrosed bone in the fungosity it opened quickly and the necrosed bone was expelled with a rapidity that could only be attributed to the success of the treatment in question.

The injections themselves are very painful, and recourse may be had to the use of cocaine with great advantage. After the injection is finished, also, great pain is observed, which lasts for some hours, and which is only relieved by the subcutaneous injection of a sufficient quantity of morphine. Immediately after the injection an antiseptic dressing should be applied, which should remain on the part operated upon all the time of the reaction.

The fever temperature which accompanies the reaction is ordinarily very high, and lasts from twelve to twenty-four hours.

When the reaction, which lasts for five or six days, has diminished, a starch dressing should be applied to the joint, which should be changed as often as it becomes relaxed; and after an interval of three to six weeks, when the state of solidification and freedom from pain is completely established, recourse may be had to massage and passive movements to re-establish the mobility of the joint.

As to the composition of the solutions of the phosphate of lime used for the injections, Dr. Freund, who elaborated the chemical part of the discovery in question, gives the following formulas:

(1) Acid solution of the phosphate of lime, approximately six and five-tenths per cent., containing one in one thousand of free phosphoric acid (sterilized for injection).

℞.	Neutral phosphate of lime......................	5.0.
	Distilled water......................................	50.0.

Then add slowly phosphoric acid to perfect solution; filter and add dilute phosphoric acid six-tenths, and distilled water to one hundred for injections.

(2) Acid solution of the phosphate of lime, approximately six and five-tenths per cent. containing one in one hundred (or two in one hundred when the ulcerous process is very indolent) of free phosphoric acid, for the saturation of the gauze.

℞.	Neutral phosphate of lime......................	50.0.
	Distilled water..	500.0.

Then add slowly phosphoric acid to perfect solution; filter and add dilute phosphoric acid sixty (or one hundred and twenty), distilled water to one thousand, for the preparation of the guaze.

GENERAL CORRESPONDENCE.

HOW SCARLET FEVER COMES TO MICHIGAN.

The Michigan State Board of Health has received information from Dr. Sifton, health officer of Sutton's Bay township, which illustrates, in a striking way, how this country gets contagious diseases from the old countries. October 2, 1887, a family arrived in Sutton's Bay, Leelanaw county, direct from Norway. The family came over in the S. S. Ohio, of the Inman line, reaching New York September 30. Scarlet fever was on board the steamer during the passage, one child dying before the landing, and "several more were sick in the same way." One child of this family was taken sick with scarlet fever the day after reaching New York. The family, however, proceeded over the New York Central and the Lake Shore and Michigan Southern, to Michigan; then over the Detroit, Grand Haven and Milwaukee, and the Grand Rapids and Indiana, to Traverse City; then to Sutton's Bay. Another child of the family has since come down with the disease. The family had a certificate, signed by the surgeon of the steamer, that they had been protected by vaccination against small-pox; so they passed without detention the quarantine authorities at the port of New York, after they had been exposed to a contagious disease which causes more deaths by far in this country than small-pox causes.

HENRY B. BAKER, M. D.

HEALTH IN MICHIGAN DURING AUGUST.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of August, (five weeks ending September 3), 1887, as follows, the diseases being arranged in the order of greatest area of prevalence:

Diarrhœa, rheumatism, neuralgia, intermittent fever, dysentery, cholera morbus, cholera infantum, remittent fever, consumption of lungs, bronchitis, tonsilitis, typho-malarial fever, erysipelas, inflammation of bowels, influenza, whooping-cough, typhoid fever (enteric), inflammation of kidney, pneumonia, puerperal fever, inflammation of brain, diphtheria, measles, cerebro-spinal meningitis, scarlet fever, membranous croup.

For the month of August, 1887, compared with the preceding month, the reports indicate that dysentery, typho-malarial fever and remittent fever increased, and that no disease decreased in prevalence.

Compared with the preceding month the temperature in the month of August, 1887, was much lower; the absolute humidity less, the relative humidity and the day ozone were about the same and the night ozone was less.

Compared with the average for the month of August in the nine years, 1879 to 1887, dysenterywas more prevalent, and intermittent fever, consumption of lungs and diphtheria were less prevalent, in August, 1887.

For the month of August, 1887, compared with the average of corresponding months for the nine years, 1879 to 1887, the temperature was slightly lower, the absolute humidity slightly less, the relative humidity the same and the day and night ozone were less.

Including reports by regular observers and others diphtheria was reported present in Michigan in the month of August, 1887, at forty-nine places, scarlet fever at twenty-eight places, typhoid fever at forty-nine places and measles at ten places.

Reports from all sources show diphtheria reported at thirteen places more, scarlet fever at three places more, typhoid fever at thirty-three places more, and measles at seventeen places less, in the month of August than in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, September 8, 1887.

HEALTH IN MICHIGAN DURING SEPTEMBER.

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of September (four weeks ending October 1), 1887, as follows, the diseases being arranged in the order of greatest area of prevalence:

Diarrhœa, rheumatism, neuralgia, intermittent fever, bronchitis, consumption of lungs, dysentery, remittent fever, tonsilitis, typho-malarial fever, cholera morbus, influenza, cholera infantum, typhoid fever (enteric), erysipelas, inflammation of bowels, inflammation of kidney, pneumonia, whooping-cough, puerperal fever, diphtheria, inflammation of brain, scarlet fever, cerebro-spinal meningitis, membranous croup, measles.

For the month of September, 1887, compared with the preceding month, the reports indicate that bronchitis, typho-malarial fever, influenza, and typhoid fever increased, and that cholera infantum, cholera morbus, dysentery, diarrhœa, whooping-cough, and remittent fever decreased in prevalence.

Compared with the preceding month, the temperature in the month of September, 1887, was lower, the absolute humidity was less, the relative humidity was more, the day ozone was much less, the night ozone was about the same.

Compared with the average for the month of September, in the nine years, 1879 to 1887, intermittent fever, remittent fever, consumption of lungs, cholera infantum, diphtheria and whooping-cough were less prevalent in September, 1887.

For the month of September, 1887, compared with the average of corresponding months, for the nine years, 1879 to 1887, the temperature was lower, the absolute humidity was slightly less, the relative humidity was more, and the day and night ozone were less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of September, 1887, at fifty-one places, scarlet fever at twenty-one places, typhoid fever at forty-six places, measles at five places, and small-pox at one place.

Reports from all sources show diphtheria reported at two places more, scarlet fever at seven places less, typhoid fever at three places less, measles at five places less, and small-pox at one place more, in the month of September, 1887, than in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, October 5, 1887.

PARIS LETTER.

THERAPEUTICAL APPLICATIONS OF ANTIPYRINE.—SALOL. —CHLORATE OF POTASSA IN CANCROID TUMORS.—THE TREATMENT OF ERYSIPELAS.

THERAPEUTICAL APPLICATIONS OF ANTIPYRINE.

The anti-pain action of this substance has been one of the greatest efforts lately made by Professor Germain Sée. He has made a number of interesting communications on the subject to the Academy of Medicine, and we had occasion to see the wonderful effects of the remedy during the whole of this year at the Hotel Dieu hospital here. As this medication is sure to have a very wide application in America, we give the way in which it is used here and the kinds of diseases that are treated by it. It is employed both internally and by hypodermic injection. The internal dose given varies from two to six grammes a day, as a rule, four grammes a day are given in divided doses. It is often given one gramme an hour, up to four grammes, either with or between meals, it does not matter. As the drug has a slight bitter taste, it is well to combine it with some aromatic solution, or it may be given in coffee, or in wafers, if some water is given with them to dissolve it. It dissolves easily in any medium.

The subcutaneous method is now very much used and its action in at once stopping neuralgic pains is remarkable. It has, indeed, all the good effects of a morphine injection and none of its defects. Its power in this direction depends on its analgesic action on the spinal marrow itself by diminishing its excito-motor power. Outside of this it does not seem to affect any of the organs of the body, nor does it produce sleep. The injections of antipyrine can be used in every case when we wish to arrest pain of any kind. The extreme solubility of the drug renders it possible to make a solution of equal parts of water with it, but as this has proved to be painful in application it was found necessary to add a small quantity of cocaine to the solution as follows:

℞. Antipyrine	10 grammes.
Cocaine hydrochlorate	0. gramme, 15 centigrammes.
Aqua distill	10 grammes.

This solution gives to each syringe of two cubic centimetres measurement, one gramme of antipyrine and fifteen milligrammes of the cocaine. One-half of such a syringeful is injected at once, and according to the pain it may be increased up to two such syringefulls per twenty-four hours, or two half syringefulls may be injected at once in different parts of the body. Rather a strong needle should be used and the injection should be made deeper than for morphine, so that it will enter well into the cellulo-adipose tissue. Almost all parts of the body has been injected, but as a rule, it is best done not far from the painful part and where there is as much fat as possible. It is but slightly painful and often leaves a small swelling which soon goes away. It is only in advanced heart cases or in Bright's disease that any cases of abscess have been seen. In every case precautions must be taken to inject *very slowly*. One gramme of antipyrine given hypodermically has usually been found to be the therapeutic dose required to relieve instantly all kinds of severe pain. There are other methods used, such as rectal injections of from three to five grammes of the drug to a pint of water, the patient holding the injection as long as possible: this has given very great relief in painful uterine troubles and difficult menstruation. It has also been used in ointment form; to rub painful parts, three or four of the antipyrine to one of lanoline. Finally, it has been tried with success in painful gonorrhœas, by urethral injection. The diseases in which it can be used are numberless; we will only mention a few of the most important.

Acute Articular Rheumatism.—In this trouble the best results are seen, cure being very much more frequent than with salicylic acid treatment; both hypodermic and internal doses are given. We have frequently seen patients unable to move hand or foot and in a few minutes after the first injection they can do so without any pain. Four grammes per day is the usual dose given after the first injection.

Hydra-arthrosis.—Here the action is wonderful given in the same way.

Gonorrhœal Rheumatism.—It is really remarkable to see how it acts in this trouble, which, as we know, is not affected by the salicylic acid treatment at all. The maximum doses are used as high as five grammes a day internally, and one gramme per injection under the skin.

Gout.—Professor Sée is treating gout, also, with great success. He gives two to three grammes a day of the antipyrine between the attacks and hyperdermics during the attacks.

Purpura Hemorragica.—In four gramme doses the pain and hemorragic effusions disappear rapidly.

Pain.—In all painful affections, of no matter what nature, it will relieve the pain at once. This is true of neuralgias, hepatic colic, nephritic colic, viceral pains as well as painful dyspepsia. Antipyrine may also be combined as follows:

℞.	Sparteine	10 to 15 centig.
	Antipyrine	4 grammes.
M.	For heart pains.	
℞.	Antipyrine	2 to 3 grammes.
	Potassium bromid	3 to 4 grammes.
M. S.	Given in epilepsia and nervous complaints.	

It may also be combined with iodide of potassium, etc., etc., and the use and combination of the drugs will occur to every practical physician.

SALOL.

While on this subject it may be well to say that this new substance is also made use of, it is of the same class as the antipyrine and salicylate of soda, but does not seem to be so active as far as we have seen. It is also quite different to antipyrine, as it is almost insoluble, so it is given mostly in wafers, or what the French call "*cachets*," as follows: Salol, four grammes, divided in four cachets. S. One in four hours, to use all in one day. It may, however, be given in liquid form by making use of an emulsion.

℞.	Salol	4 grammes.
	Powdered gum	5 grammes.
	Almond oil	5 grammes.
	Syrup	30 grammes.
	Tincture quillaya sap	3 grammes.
	Water	150 grammes.

F. Emulsion.

CHLORATE OF POTASSA IN CANCROID TUMORS.

There are certain cutaneous cancers called by the French "*cancroides*" that are readily cured by the use of chlorate of potassa. This method was tried this winter in the surgical service of Professor Reclus, at the Hotel Dieu. The smaller cancroids found on the face yield to this treatment very quickly, but it should be applied at once before the tumor is larger than a couple of inches in diameter. It is used by applying a saturated solution, or else a fine powder to the part, and renewing the dressing twice a day. No internal treatment is given. The cicatrization takes several weeks and the cure seems durable.

TREATMENT OF ERYSIPELAS.

The proper and true treatment of erysipelas now-a-days is to prevent it by antiseptic methods, but with the greatest care in surgical operations it will sometimes arise and most of the forms of treatment so far used to cure it have failed. At present we are quite fixed as to it being contagious, and as to its bacterian origin, and many things formerly done, are abandoned and others more reasonable are substituted. First, as to general treatment: if the tongue is bad it is well to give a slight laxative to be continued as needed, next milk should be the diet used, in order to get its powerful diuretic effects to aid us in eliminating the poison from the system by the kidneys. It is also certainly useful to give quinine, which is believed to act as a diffusible antiseptic, and by this very action as an antipyretic. As to local treatment, the treatment most in favor at present, is that of scarification: a series of punctures are made, and slight scarifying cuts about a half an inch in length, in all some fifteen to twenty are made to every square inch of surface, the bleeding produced is washed away with a solution of corrosive sublimate of one to one thousand, and the surface is covered with cloths wet with the same solution or with another antiseptic preparation as follows:

℞. Carbolic acid	50 centigrammes.
Alcohol at 50°	gtts. xv.
Ess. terebenthina	15 grammes.
Tinct. iodine	gtts. xv.
Glycerine	15 grammes.

A coating of this is applied every two hours to the part affected and it is covered with cotton wadding. L.

QUARANTINE DOES NOT DEAL WITH THE MOST DANGEROUS DISEASES.

Relative to the persons who brought scarlet fever to Sutton's Bay, Michigan, and who came on the steamship Ohio, reaching New York September 30, 1887, Dr. William M. Smith, health officer of the port of New York, says:

"Developed cases of diphtheria and scarlatina arriving on vessels at this port are removed to Ward's Island. It is impossible under the law for the health officer or the authorities at Castle Garden to quarantine persons who have been exposed to the contagion of those diseases, consequently the sick on board vessels during the voyage, doubtless, often infect the relatives or those with whom they come in contact * * * * and who carry the latent contagion to interior communities. I would be glad if the law allowed those exposed to the contagion of these diseases to be held for observation as is the case when persons are exposed to the contagion of small-pox."

The instance mentioned above is an illustration of what Dr. Smith says,—the child having been exposed during the voyage and taken sick with scarlet fever the day after arrival at New York; so the infected child went on its way, to spread scarlet fever. In Michigan, at least, ten times as many deaths occur from either scarlet fever or diphtheria as from small-pox.

Is it not time the whole subject of quarantine was investigated by the States, and by the United States Government, with a view to protecting the people of this country from the introduction of the really dangerous diseases?

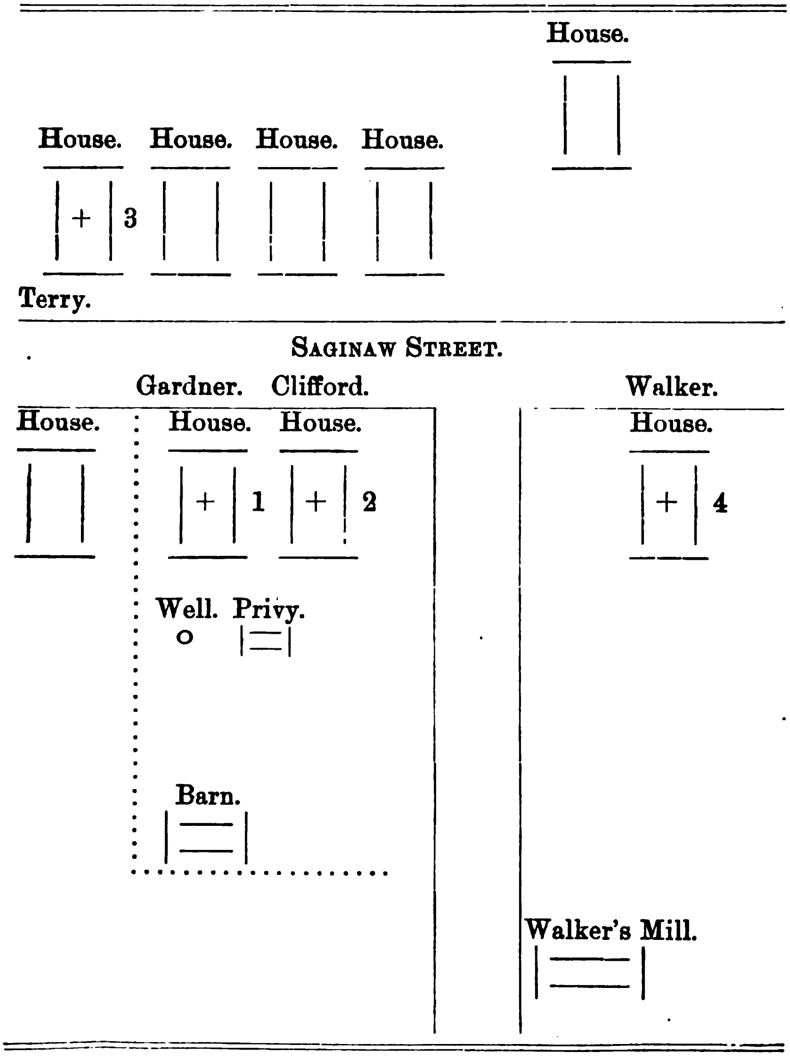
HENRY B. BAKER, M. D., Secretary.

OFFICE OF THE SECRETARY
Michigan State Board of Health,
Lansing, Michigan, November 3, 1887.

HOW TYPHOID FEVER IS SPREAD, AND HOW IT MAY BE PREVENTED.

LAPEER, MICHIGAN, October 31, 1887.

DR. BAKER: Enclosed find a short report of typhoid cases occurring in the southern part of our town. Houses marked + are the ones in which cases occurred. Numbers one, two, three and four, order of outbreak. Cases in two, three and four, traceable to water from well in rear of number one.



TYPHOID FEVER CASES IN LAPEER CITY, WITH SOURCES OF CONTAGION.

About September 1, 1887, Myron Gardner, railroad employe, came from the south sick with fever to his father's home, number one on diagram. His case was supposed to be malarial. No care was exercised with stools in the way of disinfection, but they were thrown into privy vault in rear of house, and in close proximity to well. Wash water was thrown on the surface of the ground which was very dry at the time. About September 7 or 8 a copious rain fell and soaked the sandy soil; and on the 14th William Gardner and wife, father and mother of Myron, and E. D. Gardner a brother (who was a student in my office) and who boarded at home, were attacked with fever. On this day I got home from Washington, and found four of them down with a severe type of typhoid fever, and in two weeks Myron's wife and child were attacked. Also a child across the street at Terry's, who had used water from the Gardner well. About the same time, three cases in the Clifford house south of Gardner's, who also used water from the Gardner well. None of the people from either of these houses were in the Gardner house. In the Walker house, still farther south, one case has occurred, and I was at a loss to account for this case till a few days ago when the young man said that at the mill where he was working they had used the Gardner water for a few days, owing to derangement of the pump at the mill. Two others of the mill hands—Anderson and Lester—who used the same water were attacked about the same time. Lester is now convalescent. Anderson is dead, as also the child at Terry's. When I took charge of the cases I ordered the discontinuance of water from the Gardner well, and the disinfection of the stools; and no new cases are now reported. People who assisted to take care of the Gardners and other families, and who used water from other sources, have not been attacked. Clearly Myron Gardner brought the fever home, the well became infected after the first rain from slops and privy, and the other cases got their seed from the water.

Yours truly, H. McColl, M. D.

The foregoing instructive account of the way typhoid fever was spread, in one instance, is reproduced in the hope that it may lead others to trace the spread of this important disease, and what is of greater importance, act intelligently for the prevention and restriction of the disease, as Dr. McColl did in this instance.

Respectfully, Henry B. Baker, M. D., Secretary.

Office of the Secretary,
State Board of Health
Lansing, Michigan, November 2, 1887.

TUBERCLE BACILLUS: A SYNOPSIS OF SOME EXPERIMENTS AND RESULTS OBTAINED.

When leaving school in the spring I made up my mind to do some work on the tubercle bacillus, and began that line of work very soon after reaching home. The plan of culture and detection of the bacillus was what is known as the Gibbes' method, in brief as follows: To about one tablespoonful of sputa add as much water and fifteen drops of a saturated solution of bicarbonate of soda, boil and stir with glass rod till the at first clotted sputa breaks up, then add enough water to give the mass about the thickness of skimmed milk and boil again for ten or fifteen minutes. Then set aside in a conical glass for forty-eight hours in a warm place, and at the end of that time take some of the fluid and float a cover glass on it, let the glass dry, and float it on a magenta stain, then wash in a one to three per cent solution of nitric acid, then float on a ground stain of chrysoidin or Bismark brown, let dry and mount in balsam and examine with one-eighth to one-fifth inch objective. I had no specimen at first to compare with, but readily found numerous bacilli, and after a time got a fine German mount of bacilli tuberculosis to compare with.

On comparison, I was satisfied that I had the bacilli tuberculosis, but was dissatisfied with my staining and sent a slide and letter to Dr. Herdman for advice. He advised me to try fuchsin as a test stain.

I had already gotten some fuchsin to try Erlich's method of staining, which I afterward did; but found that fuchsin used according to his method not only stained the bacilli tuberculosis, but I found also a strange bacillus shaped like a tennis racket or a snow shoe stained beautifully. On further trials I found this same bacillus three times stained with the fuchsin. Unfortunately, as Erlich's method was for a temporary mount, I have not the strange tennis racket bacillus showing the fuchsin stain, but can show it in one of my earlier mounts in another color.

Among twenty-five or thirty cultivations, after I had satisfied myself as to finding the tubercle bacillus, I only failed to find it in one case, a woman who had coughed and raised considerable of a stringy mucus for ten or twelve years, whose case has been diagnosed as fibrous phthisis. Of course, my cultivations were from persons already supposed to have consumption.

In examining some urine one day, I noticed a fact about iodine which I afterward used in the examination of sputa; that was, in adding an aqueous solution of iodine and iodide of potash at the edge of a cover glass as a test for some starch in the urine as an accidental indredient, I found that it seemed to make some vibriones which were present stand out as in relief and appear very plain. Afterward, applying this to the tubercle bacillus, I used it both on the sputa direct and on the cultivation with satisfactory results for temporary examination.

My experiments, so far as they show anything, would go to show that fuchsin was not a reliable test stain. Also, that iodide, while not staining the bacilli, yet brings them out with sufficient clearness for clinical examination. It colors everything but the bacilli.

This communication, however, is not made to record the above results, so much as to show that students and young practitioners can find in bacterial study an easy and most interesting and profitable study.

B. C. Loveland, U. of M., Class '88.

EDITORIAL PERISCOPE.

SUBCUTANEOUS INJECTIONS OF CARBOLIC ACID.

The Vienna correspondent to the *British Medical Journal* called attention to a paper published by Professor Benedikt on the use of subcutaneous injections of carbolic acid.

At the instance of Dr. Kunze, he had tried about seventeen years ago, injections with a two per cent. solution of carbolic acid in cases of rheumatism of the shoulder, with surprisingly good results. The joint, which was very painful on passive motion before the injection, was found a few minutes after the injection, to be freely movable, as if it had been narcotized. This result was the more surprising, as it was known that subcutaneous injections of morphine had not so speedy an effect in such cases. In affections of the joints, in which there were great tenderness on pressure and distinct swelling of the bones, the morbid process disappeared in a few days after the injections.

This was especially true of recent cases; but even in old and complicated cases the effect was not merely a passing one but lasted some time. Professor Benedikt also tried subcutaneous injections of carbolic acid in cases of polyarthritis, and in the first cases which he had observed the success was very striking. When the injection was made in the neighborhood of the affected joint, the pain was not only quicky diminished, but the high temperature and the pains in the other joints also decreased.

The course of the case was the same as after the administration of large doses of the salicylate of sodium.

Both agents had a general and also a local influence, but the cause of the disease was only gradually eliminated from the body, and, in Professor Benedikt's opinion, this elimination was scarcely accelerated so much by the administration of the salicylate of sodium, as by subcutaneous injections of carbolic acid. Professor Benedikt, therefore, advocated this plan of treatment in polyarthritis. The evil effects of the salicylate of sodium on the appetite, and in many cases, also on the auditory apparatus and the whole organism, were well known. When both modes of treatment were combined, the salicylate of sodium being administered in small doses, and one to three subcutaneous injections of carbolic acid being given in twenty-four hours, the course of the affection was very much accelerated, and no bad consequences were observed, especially if the treatment was carried out from the very beginning of the disease. Extraordinarily good results were obtained by the method in cases of inflammation of the sheaths of tendons, especially after injury. A few injections sufficed to cut short the morbid process, and no local or muscular atrophy, etc., was observed, provided the disease was treated in the above mentioned way from the very first outset.

Subcutaneous injections of carbolic acid also gave Professor Benedikt good results in cases of pain due to club-foot, as well as in local periosteal inflammation, in spondylitis, and in Scrivener's palsy. In most cases he had given only one injection a day, but in cases of polyarthritis he had given from three to five injections in the course of twenty-four hours. The local anæsthesia which occured in two cases (lasting in one of them several months) was due to the effect which the fluid exerted directly on cutaneous nerve-trunks.

CONDENSATIONS.

A Chinese Lady Doctor.—Miss King, a Chinese lady, who obtained the degree of M. D. at the Woman's Medical College of the New York Infirmary, and served since then as Resident Physician in New York Infirmary, and in the Children's Asylum at Mount Vernon, near New York, has recently returned to China, and will practice at Amoy as a medical missionary.

HANDSOME BEQUEST.—Mr. Richard Quain, F. R. C. S., F. R. S., has bequeathed almost the whole of his fortune, amounting to nearly $400,000 dollars, to the University College, London.

LENGTH OF MEDICAL LECTURE COURSE.—The amount of knowledge required is always increasing, and with it the amount of time needful for its acquisition. Not long ago three years were enough: now four are required, and it looks as if it would soon rise to five.—J. Matthews Duncan.

IS CANCER CONTAGIOUS.—This query is raised by the *Lancet* on a notice of the report of a case by M. Duplony, of Rochefort, where a man, who had for a long time carefully nursed his wife, who was suffering from uterine cancer, became afflicted with epithelioma of the glans penis, necessitating amputation.

SCIENCE VS. PRACTICE.—Though medical science is, in some respects, remote from medical practice, yet you cannot be good practitioners without being learned in science. The more science applicable, the better the practice. The more science in the practitioner, whether that science is applicable or not, the better, *cæteris paribus*, is the practitioner. The mere practical man, often the subject of much silly praise, is either a mistake or he is a humbug.—J. Matthews Duncan.

HOSPITAL AIDED BY THE STAGE.—A short time since, Lady Lock, the wife of the Governor of Australia, laid the foundation stone of the new wing of the Melbourne Hospital, and at the close of the ceremony said she had "much pleasure in laying it in remembrance of that noble woman, Miss Genevieve Ward, through whose exertions we are enabled to help so many sick and suffering women." Miss Ward raised the funds required by giving a benefit, of which she was her own manager, and sold boxes and stalls by personal solicitation, at enormous prices.

VACCINATION IN ANTHRAX.—The advantages following the employment of vaccination against anthrax is well shown by Professor Nocard, who published a statistical table of the vaccinations practiced since 1881, both in France and in foreign countries, with the vaccine prepared at the Pasteur laboratory.

The result, ascertained and stated by competent authority in respect to more than one-half of the animals which had been treated, was a reduction of mortality in sheep from eight to ten per cent. before to less than one per cent. after vaccination, and in cattle from five per cent. to one-half of one per cent.

THE GREATEST AGENT TOWARDS SUCCESS.—In the theory and practice of virtue, love is the greatest force; and that, as good students, you must begin, continue, and end by loving medicine, loving your teachers of medicine, and loving your patients, the subjects of medicine. With hearts so attuned you will be happy and victorious, however humble your career may be. With hearts otherwise attuned you will be neither happy nor victorious, however much of the mere outward emblems of success you may carry on your breasts, glittering and dazzling, and satisfying only mere time-servers.—J. Matthews Duncan.

THE EFFECTS OF MODERN DIET UPON THE KIDNEYS.—The great excess of albuminoids which enter into the food of the American people, necessitates the use of alcohol to carry on their digestion. When the digestive organs are thus stimulated, there must be, without question, an assimilation of a greater quantity of albuminoids than is beneficial to the system. In such condition there is a great increase in the amount of albuminoid waste, and as the most of this waste must be eliminated through the kidneys, the question is raised, Is there not a close relationship between this too liberal albuminoid diet and the increasing prevalence of Bright's disease of the kidneys?

ANTISEPTIC DUELS.—The *British Medical Journal* says a triumph of antiseptic surgery which was probably unforeseen by Sir Joseph Lister, is recorded by the French paper. As is well known, the *duello* still flourishes in France. As a rule, honor is very easily satisfied in these encounters, and all the scientific thrusts and lunges end usually in wounds which are well within the range of minor surgery. It appears, however, that in a recent affair of honor the principals, who "meant business," ran each other completely through the body. Great, therefore, was the amazement of their friends to see both heroes of the fray walking about a few days afterwards as if nothing had happened. This fortunate result is attributed to the fact, that the surgeon who was in attendance on the ground had taken the precaution to dip the swords in a strong solution of carbolic acid before they were used. This humane idea might possibly be still further improved upon, and the combatants might be compelled to fight in suits of antiseptic gauze and protective, and under a cloud of carbolic spray. The sterilization of pistol bullets may follow, and impetuous politicians will then be able to indulge in their favorite recreation with even less risk than at present.

RAISING THE STANDARD.—Among medical politicians there seems to be unanimity as to raising higher and higher the amount of knowledge and of time required, the elevation having no check but the supply of students. The higher the standard the better for the public, so long as the supply is ample. It is not here that difficulty intervenes; it is in fixing the line between a mere technical, narrow, mean education, with its cramming and its tradesman-like ideas, and its reliance on examinations, and a broader and more philosophical, a more real education, relying on what a man has thought or digested more than on what he has been coached to produce at an examination table.—J. Matthews Duncan.

THE WESTERN PENNSYLVANIA MEDICAL COLLEGE at Pittsburg began its second annual regular course, on Tuesday, September 27, with a class of near one hundred. The introductory address was delivered by the Secretary of the Faculty, Professor W. J. Asdale. Dr. Asdale congratulated the class that they entered as students of medicine at an auspicious time—that the *science* of medicine was rapidly developing—that grand and great achievements were promised in the near future—that a new pathology was being created on an endurable basis, and a new therapeusis is to be formulated. This college requires an entrance examination and provides a three years graded course. Its success has been unexampled.

THE SUPERIOR EFFICACY OF ANIMAL VACCINATION.—The use of animal lymph was strongly urged by Dr. Drysdale, of London, in a paper before the Section of Public Medicine of the British Medical Association. He cited the teaching of the late Dr. Henry Martin, that animal lymph showed none of the tendency that long-humanized lymph did to degenerate and to produce a slight scar and rapidly falling crust; that erysipelas did not occur after vaccination with calf-lymph to any extent compared with what it did with humanized lymph; that calf-lymph was a perfect preventive of small-pox for many years. From his studies it appeared to Dr. Drysdale, therefore, that in using calf-lymph, we only recurred to the original source of all good vaccination.

DIAGNOSIS OF GASTRALGIA.—In a clinical lecture Dr. Sir James Sawyer gave three cautions on the diagnosis of gastric disease, which he had learned from practice: (1) Gastralgia is not a wasting disease. (2) It is not safe to diagnose cancer of the stomach until you can feel the cancer. (3) Do not diagnose ulcer of the stomach until you have *seen* blood from the stomach, either in hæmatemesis or melænce. He considers it a clinical truth, "as the late Dr. Wilson Fox clearly insisted that pain arising in the stomach when the organ is empty, and relieved by the ingestion of food, is almost diagnostic of its nervous origin and nature."

LOCALIZED CEREBRAL LESIONS.—There is published in the *Journal of Nervous and Mental Disease*, by Dr. Seguin, two cases, supporting the theory of localization of motor functions in limited areas, cortical and subcortical, of the cerebrum. From symptoms during life and the post-mortem examination, which revealed a localized adhesive meningitis, Dr. Seguin thinks that the first case supports the view that in the human brain the cortical center of the face is in the caudal end of the second frontal gyrus, where it is continuous with the pre-central gyrus, while the second case gives additional proof, that the innervating center for the leg is in the para-central lobule, and perhaps also in the mesial ends of the pre-central and post-central gyri.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.—The publishers of this most estimable journal announce in the October number, that with the coming of the year, it will no longer be issued as a quarterly, but will be published at the beginning of each month. Certain changes will be made. The aggregate space will be increased; a larger proportion will be devoted to original articles; these will be presented in smaller divisions, so that every reader will find in each number something of interest to himself. These articles will be on the average shorter than formerly, and if necessary, to have all the divisions represented, the more lengthy articles will be divided among successive issues. The department of Progress will continue to furnish an able and systematized epitome of medical advance. Each section will be in the charge of eminent specialists. So confident are the managers of the journal that their enterprise will be appreciated, they make a notable reduction in the rate of subscription—four dollars per annum. When taken in connection with the weekly *Medical News*, the subscription rate of which is five dollars, the commutation rate is placed at seven dollars and fifty cents. Specimen copies of either periodicals will be sent free on application to the publishers, Messrs. Lea Brothers & Company, Philadelphia.

EYE COMPLICATIONS FOLLOWING MEASLES.—For acute blepharitis with swelling of the lids, compresses moistened in a warm solution of boric acid should be used permanently, while morning and evening apply to the borders of the lids a small portion of ointment containing ten grammes of vaseline and one-half gramme of yellow oxide of mercury. If the blepharitis develops into chronic eczema, warm poultices made antiseptic with boric acid, should be used, and an ointment of five grammes of vaseline and one-half gramme of oxide of zinc. For simple conjunctivitis, cold applications of a solution of boric acid, but if accompanied with keratitis the applications should be warm. When keratitis predominates, the yellow precipitate ointment should be used.

THE RELATION OF THE THYROID TO THE CEREBRAL CIRCULATION.—Professor Waldeyer made some remarks on this subject before the Berlin Medical Society, in which he gave Staël credit for pointing out relations between the superior thyroid and internal carotid arteries. The latter cannot be distended in the canal, no matter how violent the heart may beat, and is also very tortuous. The effect of these arrangements is to make it probable that there is occasionally a certain "backing up" of the blood in the internal carotid, and this artery very frequently has a dilatation just at its origin. Staël has shown that when the superior thyroid artery is small this bulb is large, and when the artery is large the bulb is wanting. Waldeyer points out the same relations existing between the vertebral and inferior thyroid arteries.

HYSTERO-EPILEPSY CURED BY A SHAM OPERATION.—Believing that the good effects said to be produced by spaying on women suffering from the different forms of hysteria, are to a large extent attributable to the mental and moral impressions produced by the operation, Dr. Chiarleoni determined to put this theory to the proof on the next suitable patient who came to his clinic. This happened to be a woman who, after a fright, had been affected by hystero-epilepsy, with more or less convulsions and paralytic symptoms. There was evidently no disease of the pelvic organs. She was subjected to a pretended ovariotomy, which, however, was merely an incision into the abdominal parietes, but was accompanied by all the paraphernalia of a true abdominal section, chloroform being of course given. This operation was followed by a complete cure. Dr. Chiarleoni thinks that spaying should not be resorted to except in cases in which it is imperatively necessary.

MEDICINE A PROGRESSIVE SCIENCE.—It seems probable that it will not be necessary in future to go to foreign countries for our local anæsthetics. Dr. J. B. Claiborne and Dr. Herman Knapp, in the *New York Medical Record*, and Dr. Edward Jackson, in the *Philadelphia Medical News*, report the results of their experience with the new alkaloid, gleditschine, derived from *gleditschia triacanthos*, indigenous to Louisiana, and which has been improperly called stenocarpine. The reports published indicate that this alkaloid has anæsthetic virtues superior to those of cocaine and hydriatic effects exceeding those of homatropine. Parke, Davis & Company, with their usual enterprise, are first in the field with a preparation of the drug for experimentation. They offer to supply samples of the fluid extract, with working bulletin containing reports regarding the drug, which have appeared in current medical literature, to physicians desiring to test the fluid extract clinically. They are also investigating at their laboratory the properties of the alkaloid, and expect to be able in a short time to supply the alkaloid itself.

SCIENCE IN MEDICINE.—It is not pelf, on the one hand, nor is it physosophy on the other; it is science that has elevated our profession, maintains its high position, and by its growth will continue to aggrandize it. Every one of you should be a grateful admirer and devotee of medical science, the grandest and most useful work of the profession, and work that has done each of you far more than you can ever hope to do in return. No doubt the immediate administrators of our utility are practitioners, and there are great practitioners—men, it may be, of enormous temporary fame and local renown, having fine special endowments; but they do nothing towards the permanent elevation of the profession; their great talents are well employed, but they are for the most part barren, except in immediate good results. Our high level of professional position is not maintained by practitioners, however great and successful, however much admired and envied. On the other hand, all of us, high or lowly, reap the profit of the scientific advances made by truly great, though pecuniarily unsuccessful, and it may be for a time, obscure men. These elevate the whole profession, and that permanently. They leave behind them for our behoof a fund of wealth in moral, social, and general professional position, upon which we should be proud to stand and to build, or at least careful not to neglect, far less ignore.—J. Matthews Duncan.

THE CAUSE OF MORNING SICKNESS DURING PREGNANCY.—No theory yet adduced regarding the cause of morning sickness during pregnancy, receives anything like general support. Dr. Oliver, of London, is the last to attempt to explain the cause. He thinks evolution "may aid us in arriving at a just and feasible interpretation." He argues that from the earliest period of existence every organism has been endowed with two distinct qualifications: (1) That of maintaining self; (2) that of perpetuating its species. At first the double function was performed by a uniform mass, free from any semblance of structural differentiation. All the visceral functions are now performed automatically, and are regulated by nerve centers located in the medulla oblongata; the uterine, by inference, being no exception. Considering the close relationship that exists throughout life between the two processes of assimilation and reproduction, there can be no doubt that the representative nerve centers act and react upon each other. When the uterus becomes the nidus for a developing germinal mass, the molecular disturbances radiated therefrom to the reproductive centres are liable to be transmitted to the pneumogastric as well, and induce either a feeling of nausea or actual emesis. Through habit the pneumogastric center becomes tolerant. The morning exacerbations are probably due to the change from the recumbent to the erect position, after sleep renders the whole nervous system more liable to explosive disturbances. Frequently patients are found who only suffer from disturbances associated with epilepsy on assuming the erect position after sleep. The more highly unstable the nervous system is, generally, the more likely and more severely is a woman who becomes pregnant to suffer from sickness.

NEW PUBLICATIONS.

A TEXT-BOOK IN SURGERY, GENERAL, OPERATIVE AND MECHANICAL. By John A. Wyeth, M. D., Professor of Surgery in the New York Pollyclinic; Surgeon to Mount Sinai Hospital; Consulting Surgeon to the Yorkville Dispensary and Hospital for Women and Children: to the Woman's Hospital of Brooklyn; Ex-President of the New York Pathological Society; Member of the New York Surgical Society; of the Academy of Medicine; of the New York State Medical Society; etc., etc. 8vo: seven hundred and seventy-eight pages. New York: D. Appleton & Company, 1887.

A most casual examination of Wyeth's Surgery shows that it contains some special features that are sufficiently good to individualize it among the numerous works on surgery; but a careful reading is required to bring out its true merits. The style of the text is terse and strong, the author being fortunate, in what was his aim, to give a maximum of detail with a mimimum of language. In this particular, care has been taken to select only such essentials as will be found serviceable, omitting lengthy historic accounts of operations, and the discussion
f pathological theories. More than the usual attention has
een given to those minor points constantly coming up in the
aily round of the general practitioner.

In the chapter on Anæsthesia, the employment of hydro-
lorate of cocaine, as a local anæsthetic, is fully described, and
ution is wisely given against the use of large doses of a strong
ution; attention being called to the danger of partial respir-
ry paralysis, which has occurred in several cases after the
ection of fifteen mimims of a four per cent. solution about
face. "Within the distribution of the fifth nerve, its
inistration should be especially cautious." For general
osis only ether and chloroform are considered. Between
e agents there is no comparison, the author considering
r so much safer than chloroform. "All of the objections
her by the advocates of chloroform narcoses, namely, its
ess of action, irritation of the respiratory tract, nausea
omiting, inflammability, extra quantity required, etc., fade
nsignificance when brought face to face with the fact that
lives are sacrificed by chloroform to one by ether."

e chapter on Special Amputation contains a number of
presenting transvere sections of the limbs at points where
ations are most frequently performed. These cuts show
ation of the vessels, which are colored, to the surround-

ing structures. The diagram showing the arterial supply to the calcanean region, will be found of great assistance toward the correct performance of Symes's ankle-joint amputation.

The bright colored plates which adorn the pages of the chapter on Ligation of Arteries, are at first sight quite captivating, but closer study of them shows their seductive character. They must not be considered aids in finding the vessels, but are designed to merely emphasize their positions in surgical regions. The worth of this chapter, however, does not depend upon the colored plates; the text being sufficiently explicit to instruct how to reach the artery safely.

Sufficient space is allotted to the consideration of cerebral localization, in treating of the surgery of the head, to lead the surgeon to intelligently use the trephine in brain injuries.

The surgery of the walls and contents of cavities is apace with the times. In cases of injury to the viscera early operation is advised.

The work was written for the general practitioner. All that is new, that is reliable, is given. In all parts, it is on the level with the wants and the uses of the physician who is not constantly operating and treating surgical patients. This class of the profession will find the work valuable, and to whom we most heartily commend it.

A PRACTICAL TREATISE ON OBSTETRICS." Volume III (four volumes). The Pathology of Labor: The Uses of Ergot. By A. Charpentier, M. D., Paris. Illustrated with lithographic plates and wood engravings. This is also Volume III of the "*Cyclopædia of Obstetrics and Gynæcology*" (twelve volumes), issued during 1887. New York: William Wood & Company, 1887.

The physician who has confined his reading on obstetrics to the text-books on this subject will find in the great work of Charpentier a large amount of information that is new and instructive. The volume before us, on the Pathology of Labor, considers the causes which may render labor difficult, impossible, or dangerous for the mother and child. These causes have been grouped under the six following heads:

(1) An abnormal condition of the expulsory forces, which may be exaggerated, diminished or perverted.

(2) Obstacles or malformations that prevent the normal expulsion of the fœtus, either of the bony pelvis in the soft parts or parturient canal, or in the vicinity of this canal.

(3) Pathological conditions that render the labor dangerous for either the mother or child.

The foregoing are called maternal causes of dystocia. Under fœtal dystocia are included:

(4) Dystocia from accidents directly connected with the fœtus (prolapse of the funis or extremities, etc.).

(5) Abnormal size (partial or total) or malformation of the fœtus or its attachments.

(6) Abnormal presentation or position; which may be complicated with prolapse of a limb or of the cord.

In the treatment of *feeble contractions*, some imperative instructions are given, which, we know, are not carried out by many physicians as radically as they should be. Many aids are mentioned, but the author says: "*Above all, wait.*" The membranes are to be ruptured only under certain conditions. "Ergot should be absolutely rejected during labor." The dictum of Pajot is earnestly supported, "that ergot should not be administered until the uterus is *entirely emptied of its contents, including the fœtus, placenta, and blood-clots.*"

The consideration of the deformities of the bony pelvis occupies one hundred and thirty pages of the book, profusely illustrated. This very instructive and interesting portion of the work, closes with the following: "We must never forget the fact noted by Ahlfeld and Simpson, that with successive pregnancies the fœtuses increase in size, and that hence a moderate contraction, allowing ready delivery at the first pregnancies, may call for operative interference in the latter."

Under dystocia, owing to the condition of the soft parts, the author first considers contraction and rigidity of the vulva and vagina, resistance and laceration of the perineum. On the curative treatment of laceration of the perineum, the author considers operative treatment in the second degree necessary; and is strongly in favor of waiting until the eighth or twelfth day or until several months shall have elapsed, in complete lacerations where surgical intervention is necessary. We are pleased to see that Dr. Grandin, the editor, differs from Dr. Charpentier and maintains that any laceration beyond the first degree should be immediately repaired, for the reason that thus a possible entrance site for septic matter is prevented, and also because the operation is a simple affair after delivery.

Under the subject of malformations of the genital organs, the statement of Schroeder is observed that the only malformations of the female genital organs that interest the obstetrician are those which do not interfere with pregnancy. The causes of maternal dystocia due to conditions of the soft parts other than malformations, includes thrombus of the vulva and vagina, prolapse of the vagina, hernial obstruction at the cervix, obliteration of the cervix, deviations of the os, swelling and elongation of the anterior lips of the cervix, cancer of the cervix, fibroid tumors of the uterus, ovarian tumors, tumors of various kinds, rupture of the uterus, ruptures and lacerations of the vagina, puerperal hæmorrhage, secondary puerperal hæmorrhage. These subjects are considered separately, with reference to their influence on pregnancy, the influence of pregnancy upon them, the diagnosis, prognosis and treatment.

Dystocia due to the fœtus depends on its annexes, in particular the cord, or on the fœtus itself. The subjects are carefully detailed. This volume contains much that is not commonly mentioned or treated upon in obstetric text-books, and will be found profitable reading.

SEXUAL IMPOTENCE IN THE MALE AND FEMALE. By William A. Hammond, M. D, Surgeon-General of the United States Army (retired list); Professor of Diseases of the Mind and Nervous System, at the New York Post-Graduate Medical School, etc. 8mo: three hundred and five pages. Cloth, $3.00. Detroit: George S. Davis, 1887.

Three years ago Dr. Hammond gave the profession a work on male impotency, which was so favorably received, that the edition was soon exhausted. The demand for the work continued, with frequent requests for the author to consider also female impotence in a second edition. This the author has done with all the thoroughness wrought from his great knowledge and clinical experience of the subject. Impotence must not be confounded with sterility. The former relates altogether to the act of intercourse. From this defect the author says that probably more unhappiness is caused than by any other disease that afflicts mankind. Impotence in the male implies the existence of some malformation, disease, or derangement of the genital organs, either primary or secondary, by reason of which there is either absence of sexual desire, of the power of erection and of consequent intermission, of the power of ejaculating the seminal fluid into the vagina, or of the ability to experience pleasure during the act of copulation, and at the same time of the emission of the semen. In considering these effects, Dr. Hammond endeavors to correct erroneous theories which are very generally entertained, and calls special attention to several forms of impotence of mental origin, which have not received the attention which they deserve.

The section relating to impotence in the female is considered under three heads. (1) Absence of sexual desire; (2) inability by reason of physical condition to allow of the entrance of the penis into the vagina; (3) absence of the ability to experience the sexual orgasm. Sexual impotence in women is not regarded so important as in man. But as it is often the cause of much unhappiness, the author treats it with sufficient thoroughness.

Dr. Hammond is a very entertaining writer, and the many striking cases and remarkable cures cited and described in his graphic language, combine to make his work attractive, as well as highly instructive reading.

A MANUAL OF PRACTICAL THERAPEUTICS. Considered with reference to articles of the Materia Medica. By Edward John Naring, C. I. E., M. D., Fellow of the Royal College of Physicians, London; Surgeon-Major (retired) in her Majesty's Indian Army. Edited by Dudley W. Buxton, M. D., B. S., London. Member of the Royal College of Physicians; Assistant to the Professor of Medicines at University College, London, and Administrator of Anæsthetics at the University College Hospital and the Dental Hospital of London. Fourth edition. 12mo: six hundred and sixty-six pages. Cloth, $3.00; Sheep, $3.50. Philadelphia: P. Blakiston, Son & Company.

Since the first appearance of this excellent work one-third of a century ago, the author through successive editions kept pace with the rapid strides made in therapeutics, and in his last edition, brings it, as far as possible, up to date. To accomplish this, and to obtain space for even brief notices of the many new remedies recently introduced into medicine and the extended uses of old ones, and to incorporate the principal changes made in the last pharmacopœia, much matter had to be curtailed, or omitted, which involved the rewriting of the greater portion of the work. Being thus thoroughly revised this popular work must meet with increased favor.

LITERARY MENTION.

BOOKS.

"The Physician's Visiting List" (Lindsay & Blakiston's) for 1883. Thirty-seventh year of its publication. Philadelphia: P. Blakiston, Son & Company.

"The Physician's Perfect Call-Book and Record from 18— to 18—." By Dr. G. Archie Stockwell, F. Z. S. Thirty-two patients per page. Morocco: Gilt, $1.50. Detroit: George S. Davis.

"Operative Surgery on the Cadaver." By Jasper Jewitt Garmany, A. M., M. D., F. R. C. S., Attending Physician to Out-

Door Poor Dispensary, of Bellevue Hospital; Visiting Physician to Ninety-ninth Street Reception Hospital, Branch of Bellevue Hospital; Member of the British Medical Association, etc. 8mo: one hundred and fifty pages. Cloth. New York: D. Appleton & Company, 1887.

"Treatise on Human Physiology." For the use of Students and Practitioners of Medicine. By Henry C. Chapman, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia; Member of the College of Physicians of Philadelphia, of the Academy of Natural Sciences of Philadelphia, of the American Philosophical Society, and of the Zoölogical Society of Philadelphia. 8vo: nine hundred and forty-five pages. Sheep. Philadelphia: Lea Brothers & Company, 1887.

"Differential Diagnosis of the Skin for Students and Practitioners." By Condict W. Cutler, M. S., M. D., Assistant Attending Physician for Skin and Venereal Diseases, at the New York Hospital Out-Door Department; Attending Physician for Diseases of General Medicine at the New York Dispensary; Late House Physician at Bellevue Hospital; Late Attending Surgeon at the Eastern Dispensary, etc., etc. 12mo: one hundred and thirty nine pages. Cloth. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1887.

"Functional Nervous Diseases, Their Causes and Their Treatment." Memoir for the Concourse of 1881 to 1883, Academie Royale De Medicine De Belgique, with a Supplement on the Anomalies of Refraction and Accommodation of the Eye and of the Ocular Muscles. By George T. Stevens, M. D., Ph. D., Member of the American Medical Association, of the American Ophthalmological Society; Formerly Professor of Ophthalmology and Physiology in the Albany Medical College. 8mo: two hundred and ten pages. Cloth. New York: D. Appleton & Company, 1887.

"The Modern Treatment of Diseases of the Heart." Part II. Diseases of the Aorta. By Professor Dujardin-Beaumetz, Member of the Academy of Medicine, and of the Council of Hygiene and Salubriety of the Seine; Editor-in-Chief of the *Bulletin General de Therapeutique*, etc., etc. Translated from the fourth French edition. By E. P. Hurd, M. D., President of the Essex North District Medical Society; Member of the Massachusetts Medical Society, and of the Climatological Society; one of the Physicians to the Anna Jaques Hospital, Newburyport, Massachusetts. The Physicians' Leisure Library.

Single copies, twenty-five cents. Twelve copies, $2.50. Detroit: George S. Davis, 1887.

"Manual of Clinical Diagnosis." By Dr. Otto Seifert, Privadocent in Wurzburg, and Dr. Friedrich Muller Assistant Der II, Medical Clinic in Berlin. Third edition revised and corrected by Dr. Eriedrich Muller; translated with the permission of the Authors, by William Duckingham Canfield, A. M., M. D. (Berlin), Fellow of the American Academy of Medicine; Member of the Medical and Chirurgical Faculty of Maryland; Visiting Physician to the Union Protestant Infirmary of Baltimore; Lecturer on Normal Histology, and Chief of Clinic for Throat and Chest, University of Maryland. With sixty illustrations. 12mo: one hundred and seventy three pages. Cloth. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1887.

PAMPHLETS.

"Feeding Patients Against the Appetite." By Ephraim Cutter, M. D., M. M. S. Reprinted from the *Medical Register*. New York: W. A. Kellogg, 1887.

"Ovarian Tumors and Remarks on Abdominal Surgery." With results of fifty cases. By Edward Borck, A. M., M. D., Professor of Surgery, Saint Louis, Missouri. Second revised reprint edition. Saint Louis: Weiss & MacCallum, 1887.

"Contributions from the School of Pharmacy of the University of Michigan." The estimation of Quinine by Kerner's Method. By E. A. Ruddiman, Ph. C. Reprinted from the *Pharmaceutical Era*, 1887.

"Transactions of the Indiana State Dental Association, Twenty-ninth Annual Meeting, held at Lake Maxinkuckee, Tuesday, June 23, 1887." Published for the Association. Mrs. W. M. Herriott, Indianapolis, Indiana.

"Laceration of the Cervix Uteri." By H. Henry Carstens, M. D., Professor of Obstetrics and Clinical Gynecology, Detroit College of Medicine. Reprinted from the *Journal of the American Medical Association*, June 11, 1887. Chicago.

"Oration Delivered before the Alumni Association of the Medico-Chirurgical College of Philadelphia, on the evening of Thursday, April 7, 1887." By Dudley S. Reynolds, A. M., M. D., Louisville, Kentucky. Reprinted from the *Medical Register*, of Philadelphia, 1887.

"Biology of Tumors." A Lecture Delivered at the College of Physicians and Surgeons, Chicago, Illinois. By N. Senn, M. D., Ph. D., Milwaukee, Wisconsin, Professor of Principles and

Practice of Surgery and of Clinical Surgery in the College. Reprinted from the *Medical Register*, of Philadelphia, 1887.

"Hay Fever." The First Prize Essay of the United States Hay Fever Association, for 1887. By Seth S. Bishop, M. D., Surgeon to the Illinois Charitable Eye and Ear Infirmary, to the South Side Free Dispensary, etc., Chicago. Reprinted from the *Journal of the American Medical Association*, July 23, 1887. Chicago.

"On the Existence of 'Dermatitis Herpetiformis' (of Duhring) as a Distinct Disease." By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc. Reprinted from the *Journal of Cutaneous and Venereal Diseases*, Volume IV, April, 1886. New York: William Wood & Company, 1886.

"On the Treatment of Felon Without Incision." By L. Duncan Bulkley, A. M., M. D., Attending Physician to the New York Skin and Cancer Hospital, etc. Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty-eighth Annual Meeting of the American Medical Association, June 7, 1887. Reprinted from the *Journal of the American Medical Association*, July 30, 1887.

"The Chemistry of Nitrogen as Disclosed in the Constitution of the Alkaloids." Address by Albert B. Prescott, Vice-President Section C, before the Section of Chemistry, American Association, for the Advancement of Sciences, at the New York Meeting, August, 1887. Reprinted from the Proceedings of the American Association for the Advancement of Sciences, Volume XXXVI. Salem Press. Salem, Massachusetts, 1887.

MEDICAL DIGEST.

PRACTICAL SUGGESTIONS REGARDING THE TREATMENT OF CERTAIN EYE AND EAR AFFECTIONS.

These suggestions were made by Dr. Reuling (*Virginia Medical Monthly*) for the general practitioner.

Blepharospasmus.—The spasmodic closure of the eyelids, which is so frequently observed in children, and not rarely in adults, as one of the symptoms accompanying phlyctenular conjunctivitis and keratitis, granulated eyelids, foreign bodies lodged in the eye or conjunctiva, and which is especially severe in cases of gonorrhœic ophthalmia and diphtheritis oculi, often forms one of the most difficult obstacles to the proper inspection of the eye and its respective pathological conditions. The procedure of forcibly compelling the patient to permit the separation of his eyelids was a most disagreeable task, which is now considerably facilitated since we have recognized the admirable qualities of cocaine as a reducer of arterial pressure, as well as a local anæsthetic. A four per cent. solution of muriate of cocaine instilled into the conjunctival sac of a patient suffering from blepharospasmus is therefore the simplest and most welcome remedy for the prompt relief of this troublesome affection.

Boric Acid a Remedy for Stye.—A simple and effective remedy for stye has been found by me to be a solution of fifteen grains of boric acid to an ounce of water. By applying this solution three times a day to the inflamed part of the eyelid, by means of a camel's-hair brush, this painful and annoying affection will be conquered very rapidly.

Soon after the recommendation by Sacmish and other authorities—"to use boric acid solution in the bandaging after cataract operation"—I was induced to saturate the round piece of linen covering the eye operated upon, in a case of cataract extraction, where the pressure of the bandage had produced blepharitis, and also an exceedingly painful stye (a small furuncle close to the ciliary margin of the eyelid). The next day, both affections had almost disappeared, and the patient, a very frail old woman, had been relieved from the suffering almost from the very moment the solution was applied. Since then I have rarely been obliged to use any other remedy, provided the patient applied for treatment during the acute stage of the stye; but even at a later period of the effloresence, I have generally seen the stye completely disappear by the sole use of boric acid solution.

Cocaine for Furunculosis of the Auditory Canal.—This extremely painful affection yields in its earlier stages very promptly to the instillation of a solution of muriate of cocaine. The following case, observed by me in July, 1886, led me to the use of this remedy:

Mrs. A. M., a prominent lady, and the sister-in-law of one of my colleagues, was apparently dying from disease of the heart, with hydro-pericardium, etc., and in addition to her excessive dyspnœa and attacks of deep syncope, she was also suffering most excessively from earache, for the relief of which I was called in the case. When I discovered that a furuncle had formed close to the tympanum, and was just about to form an abscess, I felt somewhat in a dilemma as to my procedure, as I could not make up my mind to increase the untold suffering of this afflicted lady by additional pain caused by the surgical opening of the furuncle. I instilled, therefore, a few drops of a four per cent. solution of muriate of cocaine into the meatus, and awaited developments. In less than five minutes the swelling of the meatus at its base, the seat of the furuncle, was reduced to less than one-half its size; all intensity of injection had disappeared, and by a repetition of the drops every three hours for the next twenty-four hours, the furuncle totally disappeared. The look of relief from her agony in this extremely ill patient made an everlasting impression upon me, and spoke more than words could express of the blessings which Koller's discovery has bestowed upon suffering humanity.

THE CONTRACTIONS OF THE UTERUS THROUGHOUT PREGNANCY, AND THEIR VALUE IN THE DIAGNOSIS OF PREGNANCY, BOTH NORMAL AND COMPLICATED.

A valuable paper was forwarded by Dr. B. Brexton Hicks, of London, and read by proxy at the recent Congress on the above subject. Fifteen years ago the author called the attention of the profession to the fact that during the whole of pregnancy the uterus contracts and relaxes, at intervals, usually varying from five to twenty minutes. The object of his present paper was to point out the practical application of the knowledge obtained by recognizing these intermittent contractions.

To detect these contractions, it is better up to the fourth month, to employ external and internal palpation. A single woman is brought to the physician for amenorrhœa, of four or five months' duration, and as an increased size is noticed by her friends, an easy opportunity is thus offered to make a superficial examination. Thus, without implying any suspicion, it can be ascertained whether any swelling exists in the uterine region; whether it is permanently firm or of varying density. Should the latter be the case, then there are sufficient grounds to go further into the case, and examine internally.

There is a condition of the pregnant uterus, to which the author first called attention, wherein at about the fifth month, the uterus during the intervals is very flaccid, scarcely to be felt, except at one part, where a firm lump is to be felt, more like a tumor on one side; and this condition is very often associated with the death of the fœtus, which increases the deception, although it is true that in this condition of flaccidity the fœtus is more readily felt than when the uterus is firm. The diagnosis here is difficult, between simple pregnancy, pregnancy with tumor, and extrauterine fœtation until we feel the uterus contract, when the whole is resolved into a solid ball till relaxtion again occurs. The more solid portion marks the position of the placenta.

In cases of pregnancy associated with fibroma, we are enabled, by watching these contractions of the uterus, to distinguish generally between the portion occupied by the pregnancy and that occupied by the tumor. But in cases in which the tumors are numerous and the pregnancy early, it is not so easy; sometimes it is impossible. The diagnosis between ovarian tumors alone, or in connection with pregnancy, is easy, being based upon the alteration in density of the tumor or tumors.

The diagnosis between extrauterine fœtation and normal pregnancy is more difficult, because our proof in the former case is of a negative character. If it be normal pregnancy suspected to be extrauterine, then the proof is more easy. Supposing we have a combination of the two, then a careful examination will, sooner or later, reveal which of the two is uterus.

In twin pregnancy, where sometimes one ovum is dead and small, or one complicated with hydramnios, we have difficulty in determining the nature of one, whether it be a seperate tumor; but when we find, as the uterus contracts, the variable parts brought together into one spheroid, we may conclude that the whole is within the uterus; and palpation and the stethoscope will easily reveal the dual contents.

In cases of overdistention of the uterus, as by hydramnois, e lose, to a large extent, these contractions, and there is, there-re, a difficulty in distinguishing between it and a large ovarian st, though, of course, we have other helps; and in cases of lar pregnancy of the solid kind, or where the ovum is dead d the uterus has become more resisting in consequence, we d often rigid contraction of its walls, lasting for days together. Alteration of density, alleged in cases of soft fibromas of uterus —never observed by the author—only interferes with diagnosis between these cases and those of molar pregnancy abortion, in which there is menorrhagia. The menorrhagia ntinuous except in cases of extreme anæmia—and the rate owth serve to differentiate soft uterine new formations from r pregnancy and abortion.

ersistent contraction of the uterus is rare without some mal state of the ovum, by which it is sometimes caused;

but it may be expected also to be detrimental to the vitality of the fœtus, interfering with its circulation.

Three cases were cited to illustrate the above propositions. In case IV, of suspected extrauterine pregnancy, the author was asked to decide whether the fœtus in a woman, seven months advanced in pregnancy, was placed within or without the uterus. The size of the abdomen was in correspondence with that of normal pregnancy, and the existence of a fœtus was also without doubt. The abdomen was examined only externally at first, and was soft, with only the fœtus to be felt; but in a few minutes the fœtus was less and less felt, till the abdomen was occupied by a firm pyriform mass which could easily be decided to be the uterus in contraction.

Dr. Hicks concluded with the following resume:

(1) During the whole of pregnancy, the uterus contracts at intervals, varying much, but commonly from five to twenty minutes, remaining contracted for a variable time—from three to five minutes.

(2) If we place our examining hand on the uterus at the time of contraction, the uterus will be firm, pyriform, and the fœtal parts not easily detected, in general. If we place our hand in a state of repose, or allow it to remain on till the firm condition has passed away, then the outline of the uterus is found indistinct, sometimes not to be felt at all; while the fœtal parts are more or less easily detected, and can often be pressed by the fingers into various positions.

(3) By noticing these facts we are enabled with ease, in general, to decide as to the existence of normal pregnancy: to diagnosticate between this and various tumors, both uterine and abnormal pregnancy; between pregnancy and distention of the bladder, and other conditions easily recognized by the practitioner.

(4) These intermittent contractions have the physiological use of emptying the uterine veins and thus changing the highly carbonized blood for that more aërated.

(5) From some observations he is inclined to think that there is some closely constant relationship between this highly carbonized blood-accumulation and the fœtal movements and between the fœtal movements and uterine contraction.

(6) He can confidently commend to the profession this additional help in the diagnosis of pregnancy, one easily recognized and easily learned. In his own practice it has proved to be of the greatest service for many years.—*Medical News.*

THERAPEUTIC PROGRESS.

AN extemporaneous liquor ammoni acetatis may be produced by simply dissolving carbonate of ammonia in pure vinegar.

A FORMULA FOR ERGOT—HYPODERMATICALLY.—Hildebrandt recommends the following: Aqueous extract of ergot, three parts; glycerine and distilled water, of each seven parts. From five to twenty drops may be injected beneath the integument of the thigh or abdomen to check uterine hemorrhage.

COCAINE IN CROUP.—Dr. Labrie considers cocaine as the best remedy for croup. He applies a brush dipped in a five per cent. solution of cocaine to the throat for several seconds: a few drops are allowed to go down into the larynx. The operation is repeated two or three times a day, and nothing but a little black coffee is administered to the patient.

HYDROCYANATE OF IRON.—Dr. Taylor recommends the following for the treatment of epilepsy:

℞. Iron hydrocyanate,	
Pulv. valerian, āā	ʒij.

M. Ft. Pil No. cxx. Sig. One pill three times daily after meals.

HYDRIODATE OF HYOSCINE is referred to in *Nouveaux Remedes* as "the best of the brain sedatives." Hypodermic injections of one to two hundred of the hydriodate of hyoscine may be given. Doses by the mouth are administered in from one two-hundredth to one-fiftieth of a grain. Chloral is stated to have the power of neutralizing the effects of hyoscine.

NEW ELIXIR OF TERPINE.—The following formula, prescribed by M. Vigier, contains 50 centigrams of terpine to every tablespoonful:

℞. Honey syrup,	
Glycerine,	
Alcohol at 95%, āā	70 grams.
Terpine	5 grams.

PYRIDINE FOR ASTHMA.—Germain Sée recommends that it be inhaled three times a day for twenty minutes, from a warm saucer into which a teaspoonful of the pyridine has been poured. After each sitting the patient should take a tablespoonful of the following: Syrup tolu and syrup papaveris, of each two hundred and fifty grammes; iodide of potassium, twenty-five grammes.

Compound Mixture of Muriate of Ammonia.—

℞.	Muriate ammonia........................	gr. clx.
	Syrup senega............................	f℥ij.
	Muriate morphia........................	grs. ij.
	Syrup squills.............................	f℥viij.
	Syrup prunus Virginana.................	f℥vj.
	Oil gaultheria............................	gttslxxx.

M. M.

Pill for Catarrh.—Dr. Whalen gives the following prescription :

℞.	Sulph. quinine..........................	gr. xviij.
	Liquor arsenicalis.......................	♏xij.
	Liquor atropinæ.........................	♏j.
	Extract gentian.........................	gr. xx.
	Pul. gum acacia q. s.	

M. Ft. Pil No. xii. Sig. One every three or four hours according to circumstances.

Canadol is described by Dr. Pliouchkine as a hydro-carbon from American naphtha, transparent, very volatile, having an odor of benzine, and as being insoluble in water and alcohol. Using it as a local anaesthetic he obtained the desired effect in one moment: unlike the effect obtained from ether, the sense of coldness lasted for several minutes. He was thus able to use it in enucleations and minor surgical operations.

Delirium after Salicylate of Sodium.—Dr. Schiffers records a case in which an enema containing seventy-five grains of salicylate of sodium was administered to a girl of seven, suffering from mitral insufficiency. Delirium supervened, with hallucinations of vision, speech was slow and difficult, answers to questions being indistinct and confused. There were no motor disturbances. The symptoms disappeared without treatment in one day.

Sulphurous Acid in Diphtheria.—Dr. Snow (England) extols the use of sulphurous acid in full doses in diphtheria. In severe cases a drachm should be given (to an adult) every half hour. In ordinary cases every two hours; and proportionately large doses to children. The vapor produces a choking sensation, but otherwise the mixture is pleasant in taste. A large quantity of syrup is necessary—three or four ounces in an eight-ounce mixture.

Biniodide of Mercury as an Emmenagogue.—Dr. Illingworth writes that the red iodide of mercury is a certain and safe emmenagogue. He prescribes it as follows:

℞.	Solution corrosive sublimate (gr. ss to ℥j)	℥j.
	Iodide potassium	ʒss.
	Citrate iron and ammonia	ʒj.
	Chloroform	ʒii.
	Water	ad. ℥viij.

M. Sig. A tablespoonful three times a day after meals.

Quinine Injections in Gonorrhœa.—Great success is reported by Dr. Ledetsch, Germany, with quinine injections in the treatment of gonorrhœa, particularly in chronic cases. He uses it as follows:

℞.	Quinine bisulphate	1 part.
	Glycerine	25 parts.
	Distilled water	75 parts.

Three injections are given daily at first, then two, and finally only one.

Creasote in the Treatment of Pulmonary Phthisis.—Dr. Fraentzel has used creasote for ten years in cases without fever, coughs, or complications:

℞.	Creasote	13 parts.
	Tincture of gentian	30 parts.
	Brandy	250 parts.
	Sherry, ad. q. s	1000 parts.

A tablespoonful is given two or three times a day in a glass of water, and at the same time two tablespoonfuls of cod-liver oil are given daily. The patients are kept, day and night, in freely ventilated rooms, and are fed abundantly. Improvement is manifested by gain in weight, increase of the appetite, dimunition of the cough, expectoration and pain, a reduction of the area of dullness and the disappearance of bronchial souffles.

Fluorine Compounds as Antiseptics.—Mr. Thomson before the British Association called attention to the remarkable antiseptic properties possessed by some fluorine compounds, especially by the fluorides and fluosilicates of sodium, potassium and ammonium. Of these he considers the fluosilicate of sodium best suited for a general antiseptic, it being non-poisonous and without odor, moreover it has only a slightly saline taste and might, therefore, he suggests be employed in the preservation of food. A saturate solution is not irritating to wounds, whilst it possesses greater antiseptic properties for animal tissues than a one in one thousand solution of perchloride of mercury.

BISULPHIDE OF CARBON FOR PULMONARY AFFECTIONS.—Dr. Estape claims to have cured several cases of chronic bronchitis and one of consumption with this remedy. Experiments made upon himself seemed to show that the medicament was largely eliminated by the lungs ; air from the lungs conveyed by means of a glass tube through Fehling's solution, gave a florculent precipitate of sulphate of copper. The medicine gave rise to no unpleasant symptoms, and was effective when a mixture as follows was administered in doses of fifteen grammes once daily: Sulphide of carbon, twenty-five grammes ; water five hundred grammes ; essence of peppermint, thirty drops. Patients were forbidden to use alcohol, it being liable according to the author, to act upon the bisulphide in the blood, thus forming sulphuretted hydrogen.

THE PREPARATION OF ASEPTIC SPONGES.—The *Lancet* quotes from a foreign journal the following: Sponges of medium porosity are most easily treated, those in which the pores are too fine being freed with difficulty from sand and shell-lime. They are well dried by heat, and freed from coarse sand by being beaten with canes, after which they are placed upon a coarse hair-sieve and washed until the water runs off absolutely clear and free from sediment. They are then subjected to the action of a solution of potassium permanganate (one to one thousand) for about two hours, and enough crude hydrochloric acid is added to cause the violet color to disappear intirely. Then they are washed repeatedly until the water used no longer redens litmus paper, well dried and placed in a solution of corrosive sublimate (one to one thousand) where they are to be left for ten or twelve hours. The corrosive sublimate is removed by occasional washings with distilled water, and the sponges are dried in a room free from dust (or preferably in a drying press) until loss of weight ceases to take place. It is indispensable to preserve them in tightly closed metal or glass receptacles.

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ORIGINAL ARTICLES.

SURGICAL PRINCIPLES VERSUS ROUTINE PRACTICE.

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It is well known to surgeons that their success depends on the intelligent care which the patient receives from them, and, furthermore, in many instances, the details of their practice forms an unwritten part of surgery; consequently the treatment should always be strictly in harmony with sound surgical principles, or, in other words, the means employed should be such as best to accomplish the object sought.

In the light of this fact, it therefore follows, that the surgeon who is well grounded in these surgical principles, and who intelligently applies the same in his practice, will attain a degree of success which is entirely unknown to the routinist. The former regulates his operative procedures by his knowledge of the etiological, pathological, physiological and anatomical conditions involved in the case, while the after-treatment is selected with especial reference to the accomplishment of the object which is sought to be attained. The routinist, on the contrary, in entire disregard of the general principles involved in the management of any particular case, proceeds to do certain things, merely because he or some one else has previously treated a somewhat similar morbid condition in a similar manner.

It is now apparent that the surgeon whose action is based on a thorough knowledge of the fundamental principles of surgery, may be properly compared to the mariner who goes to sea possessed of a compass, rudder and all that information which is required to enable him to avoid the dangers of the waters which he is about to navigate, while the routinist, without any definite knowledge, attempts the performance of an act which can only be safely performed by the most skillful when supplied with the necessary instruments. In further illustration of the principles which I desire to inculcate, let me call attention to the aseptic practice in the treatment of wounds as now applied in these cases. It is well known that this method of treatment is based on the fact that traumatic inflammation and suppuration are produced by the presence of certain living organisms within the wound; and, inasmuch as these complications are the chief source of danger in these cases, therefore the treatment is rationally directed to their exclusion or destruction. The former treatment is commonly designated as "the occlusive," and depends for its success on the rigid exclusion of all germs and living organisms from the wound during the performance of the operation, and likewise until the same is completely cicatrized, while the latter is generally based on the use of certain drugs which destroy the germs and organisms without otherwise doing harm to the patient.

The intelligent application of either of these methods, or a combination of them, requires a thorough knowledge of germs and organisms, as well as a full comprehension of the technique of these dressings. The possession of a thorough knowledge of these fundamental principles is absolutely essential to enable a surgeon to practice his profession successfully. It is the want of this precise and definite knowledge, or a thoughtless disregard of it, which gives rise to so much bungling and so many unsatisfactory results in the practice of the so-called aseptic surgery. The same factors are frequently the source of much serious embarrassment during the performance of cutting operations in hospitals, as well as in private practice, unless the assistants are instructed with especial reference to the part which they are to perform.

Let the reader imagine the feelings of a conscientious and careful aseptic surgeon, who has been called on to perform an amputation of the thigh under such circumstances that he cannot select his own assistants, although a dozen physicians are present and willing to help. One of this number who has just made a vaginal examination of a patient now dying of metro-peritonitis, washed his hands hurriedly in some cold water and then hastened to give assistance in the operation without giving the slightest attention to his long finger nails, etc.; another had just left the morgue, where he had recently completed an autopsy on the body of a patient who had only a few hours previously died of septicæmia; while the other ten were but slightly less objectionable on account of their recent ill-conditioned surroundings. The operator is compelled to proceed with this operation although none of the assistants possess any definite knowledge of those fundamental principles underlying aseptic practice. Consequently when they were requested to cleanse their hands in the solution of bichloride of mercury, which had been provided for this purpose, they were observed by the operator merely to dip the ends of the fingers in this compound and then quickly shake off this fluid, or even wipe their fingers on their clothing, when they were fully prepared to carry their digits into all the pockets of the wound. In the opinion of such assistants aseptic surgery is a simple jugglery, which they neither comprehend nor expect to practice successfully.

This class of assistants deem it a matter of no importance whether the ordinary silk ligature is employed in these cases or the carbolized cat-gut, and are likewise entirely indifferent to all the other essential details connected with the aseptic practice. The antiseptic practice of surgery has taken a permanent hold on all the prejudiced minds in the profession, but there are many now who pretend to employ it in their practice who are entirely ignorant of these principles, and still assume to modify it in such a way as suit their own fancy, frequently omitting the most important precautions. All the successful methods of wound treatment which are now practiced are based on the knowledge of those underlying aseptic principles, and should, therefore, be thoroughly understood by every one who attempts the treatment of open wounds, abscesses, etc.

TREATMENT OF ABSCESSES, SINUSES AND ULCERS.

The successful management of abscesses and sinuses is practically based on the same surgical principles, and may, therefore, be considered under the same head. In all cases there should be removed every paritcle of necrotic tissue, and perfect asepsis should be preserved thereafter, in every instance in which these measures are practicable. The advantages gained from this method of procedure are primarily, relief from pain, a cessation of the extension of the morbid process, a rapid disappearance of all constitutional symptoms, such as fever, diarrhœa, restlessness, etc., while the secondary results are frequently even more important, since we are thus frequently enabled to save a limb, or even the life of a patient, which would otherwise be lost. Having already pointed out the general surgical principles which should be rationally applied in the management of these morbid conditions, we are thus brought to the consideration of the various details in our operative procedures and the after-treatment.

It is already self-evident to our readers that the operative procedures required in the primary treatment of abscesses differ widely from those which would be adapted to the management of an ulcer, since the former is a closed and the latter an open wound; while the sinus may ordinarily be regarded in surgical parlance as a specifically modified abscess. Our opinion is in strict harmony with that which is now held by the highest surgical authorities in regard to the propriety of the early evacuation of the pus in all cases of acute abscesses, but the point on which we desire especially to fix the attention of the reader is the necessity of removing every particle of necrotic substance which may exist within the abscess or adhere to its walls. How is this to be accomplished?. It is self-evident that it can only be done by freely opening the cavity; in fact, opening it so freely that the operator's fingers may be carried to the bottom of every pocket connected with the cavity. The primary object of this procedure is the removal of all necrotic substances; but in many instances the secondary advantages are worthy of the most careful consideration.

Let us recall the numerous instances connected with septic infection in which abscesses form with surprising rapidity in the connective tissue of the forearm, arm, leg and thigh; and, when after the lapse of only a few hours, the pus will be found to have extended from the wrist to the elbow, or from the ankle to the knee, etc. The prompt benefits arising from a free incision carried between these points, and the careful removal of all the necrotic substances, the thorough cleansing of the cavity and likewise the bringing of the integument and other tissues which had been displaced by the pus, into immediate contact with the underlying parts.

In these cases thus treated the further contamination of the system with septic infection from this abscess is effectually avoided if the wound is kept in an aseptic condition and the displaced parts, when thus brought into contact, quickly unite.

The surgeon may likewise, in suitable cases, after having thoroughly cleansed the cavity, ligated all bleeding vessels with aseptic ligatures, then proceed to suture the parts with the intention of securing union by first intention. In those cases when it is thought proper to suture the deep parts within the wound, I am in the habit of employing the carbolized cat-gut ligatures, but prefer the iron wire, numbers thirty-two to thirty-six—sizes much used by florists—for suturing the integument. This wire, as a suture, possesses many advantages over the silver which has been so much vaunted, and which will be promptly recognized, while its cost is trivial in comparison.

Let us here endeavor to impress the profession with the necessity of promptly evacuating the pus of every acute abscess, and what is equally as important, the removal from the cavity of all the necrotic substances, and furthermore the careful preservation of perfect asepsis. The importance of urging these views upon the profession is found in the fact that the general practitioner, and likewise a considerable number of those frequently designated as surgeons, are habitually accustomed in their treatment to sadly bungle these cases by neglecting these important precautions. The opening of these abscesses is frequently delayed until irreparable damage has been done, while in other cases a small puncture is made and a small portion of the pus is evacuated.

The wound is then frequently covered with a hot poultice, although in some instances a short drainage tube is occasionally placed in the opening prior to the application of this ancient and scientifically contra-indicated remedy. This routine practice is not based on sound surgical principles, nor does it produce the best attainable results.

It has been no part of the author's intention to supply the reader with those details which must be carefully carried out in the treatment of these cases in order that success may be secured; but he has endeavored to bring forward the fundamental principles on which the scientific treatment of these morbid conditions is entirely based.

So far as the local treatment is concerned, let me here say in conclusion, even though it is a repetition of that which has already been said, that the successful management of these cases *absolutely requires that all necrotic substances should be removed at the earliest possible moment*, thus obtaining an aseptic condition, perfect cleanliness, and the *same must be carefully maintained*, while the diseased parts are kept in the most favorable relation for the accomplishment of the object which the surgeon desires to attain.

The objection may possibly be raised that perfect asepsis cannot always be secured or maintained in these cases; and therefore permit me to reply to this demurrer that the efforts of the surgeon ought never to be relaxed on this account, since they are assuredly made in the right direction, and it is a well-established fact that the nearer the work approximates to the ideal which has been set up, the greater will be the success of the treatment.

CLINICAL LECTURES.

A NEW METHOD OF TREATMENT OF THE VEGETABLE PARASITIC DISEASES OF THE SKIN.

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REPORTED FOR THE PHYSICIAN AND SURGEON BY SPECIAL STENOGRAPHER.

GENTLEMEN: I shall direct your attention this afternoon to the treatment of what are commonly known among dermatologists as the vegetable parasitic diseases,—namely, tinea favosa, tinea versicolor, and the three forms of tinea trichophytina. As the form of tinea trichophytina, known as tinea circinata, or ordinary ringworm, and tinea versicolor, are very superficial, they are therefore very readily cured by the application of any of the parasiticide remedies, or by any of the ordinary methods. The method I am about to mention during the course of my remarks will therefore be more applicable to those skin diseases wherein the deep structures, as the hair follicles, etc., are involved,—namely, favus, ringworm of the scalp, and Barber's itch. Though in the latter diseases many methods of treatment have, from time to time, been suggested and tried, they are nevertheless very stubborn to treatment, particularly so unless all the diseased hairs be systematically removed.

For this reason, I feel warranted in assuming that a suggestion regarding a method which to me bids fair to be preferable to many others, and which has never before in my knowledge been referred to, will be tolerated, as also a brief report of the few cases which I have treated in this manner. The great object in all methods is to apply the parasiticide in such a manner as to insure its penetration to the bottom of the hair follicles, and into the hair structure itself beneath the surface of the skin.

Theoretically, and I think practically likewise, the method I am about to describe accomplishes this purpose.

There is a long recognized law in electro-physics by which fluids in a galvanic current move from the positive to the negative pole; and it has been demonstrated years ago, and over and over again, that the absorption of medicinal substances may be induced by applying this principle,—namely, by applying the substance to be absorbed on the positive electrode, placing it on the skin, and completing the circuit by placing the negative electrode on some other part of the body. This is perhaps best substantiated by the fact that a solution of cocaine applied to the surface of the sound integument in this manner will in a very few minutes so permeate the skin as to produce complete local anæsthesia of all the cutaneous and subcutaneous structures covered by the positive electrode, upon which subject I read a paper at the last meeting of the American Medical Association (Journal American Medical Association, August 20, 1887). It was, in fact, in making these local anæsthesia experiments by this method that the thought first occurred to me that the same principle might be used to advantage in the treatment of these very stubborn and annoying maladies.

The means employed, then, by the method which I am about to describe to induce the penetration of the parasiticide remedy, are the galvanic current; though by applying the method it is possible also that the electricity itself has a salutary effect upon the diseased condition, or, in other words, has a destructive influence upon the fungus giving rise to the disease.

With your permission and careful attention I shall now proceed with a description of the method as I have employed it.

Battery, Strength of Current, etc.—Though not an expert electrician myself, I believe it is an established fact that a large number of small cells gives more electrolytic action than the same area of large cells. I have therefore used a battery constructed on this principle, the same instrument, in fact, which I use for the removal of superfluous hairs by electrolysis, known as the McIntosh battery. For reasons not necessary to discuss at present, the Faradic current will not answer, neither will the negative pole of the galvanic. The strength of the current must vary with the sensitiveness of the part, the size of the electrode, etc. It is always necessary to use the strongest current that can be borne without discomfort to the patient, which, with the battery I use, when in good order, varies from five to ten cells, but for which no rule can be laid down, the only guide being the feelings of the patient, and the experience and discretion of the physician. For instance, to state a given number of cells would be inaccurate, inasmuch as the strength of the cell always varies with the freshness of the battery fluid, the length of time the plates have been in use, etc. To specify it as so many millimters would be unscientific without giving the size of the electrode, or stating the amount of the resistance. When there is much irritation or hyperæmia the current will not be tolerated so strong, and it is not necessary that it should, as there is then less resistance. The sponge on the electrode used for the parasiticide solution should be of the finest and softest quality.

Mode of Application.—The surface to be treated as you see in the case before us should first be thoroughly cleansed of crusts, scales and sebaceous matter, the usual process of oiling and washing with soap and hot water, etc., and if thought necessary, of course, the loose hairs may be removed, though I think by this method a cure can be effected without that process. Saturate the sponge of the positive electrode with whatever parasitic lotion is preferred, which may be aqueous, alcoholic or ethereal and place it as you see in this case directly upon the part to be treated. We now place the negative electrode, well saturated with water, on some point near by. A more remote point, as the hand, for instance, will answer, but it will take longer time to get the same effect than when placed near by. The electrodes must now be kept firmly pressed to the skin, the positive being now and then moistened as required with more of the solution and the negative with more water. In order to get a sufficient effect the positive electrode should remain on each place several minutes before applying it to another place; and I think on the scalp it is not wise to continue the treatment over ten or fifteen minutes in all at each sitting, and, perhaps, not oftener than once a day. The parasiticide we are now employing in this case is a one per cent. solution of bichloride of mercury, and as you see me rub it in as it were with the electrode I have, previous to this case, only been able to treat three patients by the method; one of favus, and two of tinea tonsurans, and though mild in form all were readily cured in a short time. They may be reported briefly as follows:

Case I.—John A., aged seventeen, otherwise fairly healthy; was first seen January 12, 1887. Had eruption on the scalp for ten years, during which time he had been treated by numerous physicians without receiving any permanent benefit. Ordered all local treatment, and washing of the scalp suspended for two weeks. January 26: Examination revealed a patch midway between vertex and forehead about two inches in diameter, covered more or less with the characteristic yellow sulphur-colored crusts, showing in many places distinctly the cup-shaped character. Hairs dry, brittle, broken off, and loose, and considerable thinning; also two or three other small patches similar in character. Examination with the microscope showed the crusts to be composed of the characteristic spores and mycelia. The part was thoroughly cleansed and the treatment began as described, and continued daily. In addition an ointment of one part of citrine ointment to four of lard was applied every night, and the following morning the scalp was thoroughly cleansed preparatory to the electrical treatment. This treatment was carried out daily till February 1. The patient was not again seen until the latter part of May, when he was found to be entirely free from the disease.

Case II.—Mary L., aged ten, applied for treatment February 21, 1887. Had scaly patches on scalp for four years, one patch in region of parietal eminence of right side about two inches in diameter, and two other smaller patches. Hairs broken off, etc. Microscope revealed the trichopyton in and around the hairs. Treatment same as case one, except that no ointment was applied; was continued daily almost for three weeks. June 12: Patient has had no treatment since March 14, and has been well ever since.

Case III.—Susan L., aged twelve, sister to Case II, applied for treatment at same time. Had the disease similar to her sister, though not quite the same extent, for two years and a half. Diagnosis also verified with the microscope. Treatment commenced at the same time as her sister, and continued in the same manner for the same length of time.

Though I have been unable, from the very limited number of cases treated, to determine to my entire satisfaction the full merits of the method, or the comparative merits of this and other methods, I am nevertheless satisfied that I accomplished results in these cases that could not be done by any other line of treatment, and I therefore feel warranted in recommending its adoption by those in dermatological practice, and I feel convinced that with further experience, more extended observation, and the more general adoption of this method, it will be found superior to all others that have been tried.

ORIGINAL TRANSLATIONS.

FRENCH LITERATURE.

TRANSLATED BY C. J. MINER, ANN ARBOR, MICHIGAN.

CONSIDERABLE HEMORRHAGE BY THE TRAUMATIC RUPTURE OF VARICOSE VEINS OF EXTERNAL GENITAL ORGANS DURING PREGNANCY.

The appearance of a hemorrhage during the last months of pregnancy awakens immediately, in general, the idea of a placenta previa. It is well known that, though the faulty placental insertion is the most frequent cause of losses of blood at this period of gestation, there are a certain number of cases that recall a totally different etiology.

To this last category belong the hemorrhage due to the rupture of varicose veins of the external genital organs. The true source of the hemorrhage is so often misunderstood, in an accident of this kind, and, on the other hand, the necessity of a speedy intervention is so urgent, that we have thought good to publish the following observation :

Observation.—At one o'clock in the morning of the third of July, a woman, pale and bloodless, was carried on a stretcher to the lying-in ward of the charity. She had a considerable hemorrhage from the genital organs. The *sage-femme* who accompanied her, gave the history of the patient, who on account of her extreme feebleness, could only respond in a very insufficient manner to the questions put to her. This woman, secondipara, had arrived nearly to the term of her pregnancy, in the course of which she had presented no other abnormality than a slight œdema of the lower limbs ; at about the fifth month with some painful cramps of the legs. Some days after she complained of vague pains in the kidneys and hypogastric region. The second of July, at eleven o'clock in the evening, after a short walk, she climbed on the top of an omnibus to return home. She seated herself by mischance on one of the iron bars which separate the seats ; immediately she felt that her clothing had become damp. The shock was so slight, not at all painful, that she attached but little importance to the fact. But at the end of two or three minutes she complained of great sickness, and felt very weak. The persons who were around her noticed the liquid that flowed from her continually and formed a pool on the floor. They could see that it was blood. They prepared immediately to take down e woman, whose strength decreased more and more, and who as soon in a syncope. She was taken unconscious to a carriage nd driven to the house of the *sage-femme* who had charge of he *accouchement*.

There she regained consciousness. Her feebleness was such hat they hesitated to go up the stairs, and left her at the foot of he stair-case, and called a physician in haste. He examined he patient, practiced the touch, and not finding the cause of the hemorrhage, advised carrying her to the hospital. Another syncope came on in the course of this examination.

During all this time the hemorrhage had persisted without interruption, and as abundantly. The cushions of the carriage were covered with blood clots and completely soaked : the blood flowed to the earth, forming a continuous trail from the carriage to the house of the *sage-famme*, who lived at the end of a passage, and from the house of the *sage-famme* to the stretcher, which served to carry the patient to the hospital.

During the last passage the hemorrhage was spontaneously arrested. It had continued about an hour and a half; one can hardly estimate, even approximately, the quantity of blood which had been lost, but one can affirm that the quantity was considerable judging by the preceding history and the general state of the woman at the time she entered the service. Pale, white as wax, she lay stretched on the bed where she had been placed, and, so to speak, incapable of the slightest movement. The respiration was quickened, the pulse was very frequent. The patient had regained consciousness some moments since, but she responded feebly to the questions put to her, and sometimes her responses were incoherent. She had constant nausea and sometimes vomiting.

No blood flowed. They examined the external genital organs and found the superior part of the left lesser labium swollen, purple, and the seat of a tumor the size of a large hazel nut. On turning back this labium they saw at the superior part of its internal face, near the urinary meatus, a wound with irregular borders, stopped up with a blood clot. This wound, irregular, circular, measured about five millimetres in diameter.

On the internal face of the right lesser labium wound some well developed varicose veins. On the left lesser labium there was also a varicose tumor the size of a grain of millet, two centimetres below the wound. At no other point could be found traces of varicose veins. There were none on the lower limbs.

They practiced the touch. There were no clots in the vagina.

The cervix was long, the internal os was closed. One could feel no uterine contractions.

The sounds of the fœtal heart were good. By palpation they found that the fœtus presented at the top in the right posterior, occipito-iliac position.

The external genital organs, the abdominal wall and the lower limbs covered with blood, were washed with care, and they gave the woman an injection of sublimate. Then they applied to the wound of the lesser labium punts and cotton soaked with sublimate. A large tampon was adjusted to make pressure and the whole maintained by a T bandage.

They made two injections of ether which momentarily revived the patient, and the following potion was prescribed to be taken by the tablespoonful during the night:

℞.	Gummy jalap	100 grammes.
	Rum	60 grammes.
	Extract of quinine	4 grammes.
	Acetate of ammonia	6 grammes.

They also gave ice for the vomiting.

During the night there were several syncopes of short duration, and the patient vomited many times.

At seven o'clock in the morning there was considerable pain in the hypogastric region.

At eight o'clock the general state was better. The pulse still somewhat feeble, but not accelerated. The woman has pains which last about ten minutes. By the touch she is found to be in labor. The cervix almost completely effaced, and a dilation of two centimetres. The clot which obstructed the wound on the left lesser labium had become detached, and one can see to their depths vascular orifices quite large. The thrombus has decreased, and is scarcely the size of a hazel nut. They place on the wound a tampon of cotton soaked in sublimate, which is to be frequently renewed. The lying-in terminated at a quarter after twelve with the birth of a fine child weighing three thousand one hundred and fifty grammes.

After the delivery, which took place a half hour after, they dressed the wound with cotton and sublimate.

They used the same dressing on the following days. On the morrow the thrombus had disappeared.

The strength gradually came back. The after-birth was absolutely normal; there was never an elevation of temperature.

The woman was discharged on the thirteenth of July; the wound was completely healed. The general state was excellent.

We have had the curiosity to seek out the analogous cases published up to this day.

Besides the observations cited by our excellent master, M. Budin, in his fellowship thesis on "varicose veins in the pregnant woman," we have been able to find but three others, two of Peter Young and one of our collegue and friend, M. Berthod. What strikes the reader of these observations is the extreme gravity of this variety of hæmorrhage; since, in thirteen cases, nine times it has terminated fatally, that is in a proportion of sixty-nine and two-tenths to one hundred. There is its profuseness, which rapidly places the patient in imminent danger of death—patients have even been known to succumb before the arrival of a physician; there is then its spontaneous appearance on the occasion of an insignificant traumatism often so light that it has passed unperceived for the moment; finally there is the frequency of diagnostic errors to which it gives place; for in a number of cases, the women have died for want of appropriate treatment, or owed their safely to the spontaneous cessation of the bleeding.

The most frequent error committed, as we have said, is to think it a placenta-prævia, and they then practice vaginal tamponning, which either momentarily arrests the hæmorrhage, and accidentally, thanks to the compression of the most superficial tampons, or accomplish nothing and let it persist, or even notably augment it by the obstruction to the return circulation.

At other times the *sage-femme* or the physician, not finding the signs of faulty insertion and not suspecting the existence of the true lesion, hesitate and wait, and the patient dies, if the hæmorrhage continues without the intervention of any remedy. For instance, the woman of whom we have given the history would probably have died if the bleeding had not stopped of itself while they carried her from the house of the *sage-femme,* where she had been incompletely examined, to the charity.

We believe, with M. Budin, that one can draw from these facts one conclusion essentially practical. With all pregnant women who present a sudden and abundant hæmorrhage, one ought not to fail to make at once a very careful examination of the external genital organs. One can so discover, in the class of cases which occupies us now, the venous wound, the source of the bleeding and the stopping of it becomes a matter of extreme simplicity; the application of forceps or of a tampon well placed, or even simple digital compression, will suffice to check the bleeding which rapidly places the woman in a very grave state even though she do not die.—*Le Progres Medical.*

(From the following number of *Le Progres Medical*):

Apropos of an article on "hæmorrhage by the rupture of varicose veins of the external genital organs during pregnancy," Dr. Boissard, *chef de clinique* and deputy to the faculty, kindly gave us an observation that escaped our bibliographic search. We think, with Dr. Boissard, that considerable scientific interest is attached to the case which has just been added to those we cited.

The following *resume*, which he gives, of the observation that he found at length in the thesis of M. Mougeot, shows well the analogy of the case in question to that which we reported.

"On the 12th of January, 1883, a woman, pregnant six months, was brought to Lariboisère. She was pale and bloodless. She had just suffered a sudden formidable hæmorrhage while on the top of an omnibus, after having seated herself carelessly on one of the iron bars which separated the seats.

At the time of her arrival at the hospital the blood had almost ceased to flow; the pulse was thread-like and she was in a profound syncope. By the touch they found the cervix quite firm and still retaining its size; they could find no trace of placenta or fœtal parts, nor of clots, or of vulvar or vaginal thrombus. They could not find the point of the escape of blood. To prevent the return of the hæmorrhage they tamponned the vagina with carbolized cotton; they warmed the patient and gave six subcutaneous injections of sulphuric ether.

On the morrow they removed the tampon with great care. Dr. Pinard found no blood in the vagina, but he observed some small varicose veins and an ecchymosis at the lower part of the vulva; on the left lesser labium, two or three centimetres from the fourchette, he saw a varicose vein, from which, after a careful examination, there seemed to him to have been a flow of blood. This proved to be the point of bleeding. On the 26th the patient expelled the ovum entire. The dead fœtus was still in the amnionic fluid. The after-birth was normal. On the 23d of February the patient left for Vesinet."

To this we will add a case which has just been communicated to us by Dr. Rapin, of Geneva. M. Rapin says that, eighteen years since, being called to a patient, pregnant six months, for a sudden genital hæmorrhage, he was surprised, at examining this primipara, at the enormous development of the veins of the greater labia, and he asked himself, if, considering the varicose state, the hæmorrhage which had just taken place could not have come about by the rupture of a vulvar vein. He indeed found this to be the case by later examination. "Although this woman," adds Dr. Rapin, "has since had many pregnancies, this accident has not occurred again." M.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CASES.

REPORTED BY F. W. BREWER, CLINICAL CLERK.

ANEURISM OF THE FEMORAL ARTERY.

Frank S., aged ten years, the son of a farmer residing at Calkinsville, Isabella county, Michigan. Admitted to Hospital, Ann Arbor, on the morning of the 19th of October, 1887.

History.—About two and a half months previously he was boring a hole with a pocket-knife through a strip of pine wood, when, the wood proving softer than he expected, the knife suddenly slipped through the strip and his clothes and penetrated the thigh, making an incision about three quarters of an inch long obliquely outwards and downwards. The underlying artery was injured and considerable hæmorrhage ensued, which was controlled.

Present Condition.—Upon examination there was a considerable tumor visible over the sartorius muscle of the left leg and the aneurismal bruit could be distinctly heard over the superficial femoral artery. The patient's father stated that the size of the tumor was gradually increasing, but that the general health of the lad was good. Pulse, 116; temperature, 99.

On the 20th of October, at 2 P. M., he was presented at the clinic of Professor Maclean, and having been placed under the influence of chloroform at 2:17, the aortic compress was applied, and at 2:20 circulation was found to have ceased in the lower extremities. An incision was made at the apex of Scarpa's triangle about two inches in length, and a careful dissection was made down to the aneurismal sac, which was opened and the clot and contents evacuated. The compress was slightly relaxed and the bleeding point by that means accurately determined. The artery at that point was then freed from its connections and strong catgut ligatures applied above and below the opening. In the primary incision the saphenous vein was divided, which was also ligated at the proximal and distal ends, and ligatures were also applied to several other bleeding points. The aortic compress was entirely removed at 2:32. The incision was closed by interrupted silk sutures, and protective cotton wadding and bandages were applied. Drs. Hendricks and Sullivan assisted. Anæsthetic administered by Dr. Lacea. Chloroform used, five drachms.

No special antiseptic measures were used except cleanliness at the operation; suppuration, however, was not prevented. On the seventh day, while douching the cavity, two small ligatures firmly knotted came away in the morning; in the evening of the same day a third ligature escaped from the wound. The highest temperature was reached on the second day after operation, when the thermometer under the tongue reached 103.2; subsequently temperature fell below 100, and at no time afterwards exceeded that. The case progressed favorably, and patient was discharged on the 1st of November.

EPITHELIOMA OF HAND.

Mr. S. H. M., aged fifty years, carpenter, Edgerton, Ohio. Admitted to the University of Michigan Hospital on the 6th of October, 1887.

History.—Four years ago, while engaged in his business, his right hand was jammed between two planks, causing a severe bruise, accompanied with great pain. He applied liniment to the bruise, but a swelling formed on the palm which he opened with a pen-knife, and a little pus was evacuated. The incision healed, but left an induration on the palm, and about six weeks afterwards the wound re-opened, pus flowing therefrom for a time; then the sore healed. That process was repeated throughout a year, after which the sore refused to heal. Last February the induration was excised; the wound refused to completely heal. Since the operation a large warty-looking ulcer has formed, with a deep and very hard base, and discharges a free quantity of pus. It is not painful, but bleeds upon the slightest provocation. The ulcer is oval in form, about one and one-half by two inches.

Present Condition.—October 6, he appeared at the clinic, of Professor Maclean. There was an open sore on the thenar portion of the palm, which was diagnosed a malignant growth—

ithelioma. The glands of the arm not involved. Probably e best thing to do would be to amputate the fore-arm, but the atient was anxious to save as much as possible of the hand.

On the 13th of October he was again before the clinic, when rofessor Maclean decided to amputate the thumb and excise e cancerous growth. The patient having been placed under e influence of an anæsthetic (chloroform), and Esmarch's andage applied. Professor Maclean made a triangular incision, emoving the thumb at its carpo-metacarpal articulation, after- ards dissecting round the cancerous growth, which was effect- ally removed. The vessels ligatured and dressings applied. ime of anæsthetic, five minutes; administered by Dr. Lacea. ime of operation, thirteen minutes. Drs. Sullivan and Gundlach assisted.

On the 17th of October the patient was again presented at the clinic. Wound healing and aspect most favorable.

GENERAL CORRESPONDENCE.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of October, (four weeks ending October 29), 1887, as follows, the diseases being arranged in the order of greatest prevalence.

Rheumatism, neuralgia, bronchitis, intermittent fever, consumption of lungs, diarrhœa, remittent fever, tonsilitis, influenza, typho-malarial fever, erysipelas, pneumonia, dysentery, inflammation of kidney, typhoid fever (enteric), diphtheria, scarlet fever, inflammation of bowels, whooping-cough, cholera morbus, cholera infantum, measles, inflammation of brain, membranous croup, puerperal fever, cerebro-spinal meningitis.

For the month of October, 1887, compared with the preceding month, the reports indicate that bronchitis, pneumonia, remittent fever, scarlet fever, diphtheria, and tonsilitis increased, and that diarrhœa, dysentery, cholera morbus, cholera infantum, and typhoid fever, decreased in prevalence.

Compared with the preceding month, the temperature in the month of October, 1887, was considerably lower, the absolute humidity was much less, the relative humidity was less, the day and the night ozone were more.

Compared with the average for the month of October in the nine years, 1879 to 1887, intermittent fever, consumption of lungs, diphtheria and diarrhœa, were less prevalent in October, 1887.

For the month of October, 1887, compared with the average of corresponding months for the nine years, 1879 to 1887, the temperature was considerably lower, the absolute humidity was less, the relative humidity was the same, the day ozone was slightly more, the night ozone was less.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of October, 1887, at fifty-eight places, scarlet-fever at thirty-six places, typhoid fever at forty-five places, measles at twelve places, and small-pox at one place.

Reports from all sources show diphtheria reported at seven places more, scarlet fever at five places more, typhoid fever at one place less, measles at seven places more, and small-pox at the same number of places in the month of October, 1886, as in the preceding month.

HENRY B. BAKER, M. D., Secretary.

LANSING, November 3, 1887.

DEATH OF MOSES GUNN, M. D., LL. D.

At a meeting of the Faculty of the Department of Medicine and Surgery, of the University of Michigan, held on the 4th instant, the following notice of the late Dr. Gunn was passed by a unanimous vote, and ordered spread upon the records, and a copy thereof to be forwarded to the family of the deceased and to the medical press for publication:

The Faculty of the Department of Medicine and Surgery, of the University of Michigan, have heard with profound sorrow and regret of the death, on the 4th instant, of Professor Moses Gunn, M. D., LL. D., of the Rush Medical College, of Chicago. And they cannot neglect the regretful duty which this sad event imposes upon them of paying a tribute of respect and honor to his memory, and placing on record a recognition of his former services in connection with this college.

To Dr. Gunn is due in a large degree the credit of the original organization and conduct of this school. From his student observations he realized fully the superior advantages that accrue to a medical college of high grade; these advantages, in a measure, consisting of libraries, museums, and collections of apparatus and materials to aid in the study and teaching of physics and other subjects auxiliary to medicine. And when he learned that Michigan, which had just thrown off her territorial organization and had been admitted into the union as a State, had provided, in the constitution submitted to the popular vote for ratification, for the establishment of a State University which should contain, among others, a college of medicine and surgery, he recognized, on the instant, that here was an opportunity for the organization of a medical college on broad and firm foundations.

He felt also, in view of the rapidly increasing population of the Northwest and its boundless possibilities for development in everything which contributes to or constitutes an educated and civilized State, that if such a school were properly organized and discreetly managed it was certain to become an assured success. Under this conviction, which was not a sudden impulse of the moment or the dreamy speculation of a visionary enthusiast, but was the logical outcome of previous and well-matured thought, he acted immediately, and, although he had graduated an M. D. only six months previously and was without acquaintance or influence in the new State, he determined, with a courage almost audacious, to go to Ann Arbor where the young university had been located, and if by any possibility he could accomplish it, to take a part in the founding of the required college.

Like a prudent general in entering on a siege, he began his approaches from a respectful distance, and his first move was to announce a public course of lectures on anatomy, especially in its applications to surgery. The lectures were to be illustrated by dissections and demonstrations upon the human body, for he had very wisely brought with him from the east material for this very purpose. To these lectures he invited physicians in the near vicinity, officers of the already established Literary Department of the University, advanced students, and any others who might be interested in the subject. While engaged in this work, which proved very successful, he busied himself also in the matter of the required medical school of the University, and on appropriate occasions urged its establishment and made suggestions as to its organization and control. It soon became evident that he understood the whole question and was himself ably qualified to take part in it. His name was frequently suggested in connection with it, and although it met with a formidable opposition on the ground that he was a stranger and unknown in the State, his fitness for the place had been so abundantly shown that he was appointed by the Regents as a member of the first faculty. This was the realization of his cherished desire and purpose and the great opportunity of his life, and now, with an energy and determination akin to the courage he had previously manifested, he devoted his entire time and attention to the task before him, and soon he became a power among his associates and was influential in shaping the policy and management of the school. As it steadily grew in size and importance additional teachers were required, and with keen discrimination he called to the aid of himself and his original colleagues lieutenants who were thoroughly qualified for the special work assigned them. Under these associated leaders and their successors, the college maintained a steady growth, and Dr. Gunn had the happy satisfaction and the rare good fortune of seeing the little institution which he had so largely guided and sustained in its infancy develop into one of the largest, most influential and successful medical colleges of the country. We, their successors, owe an abundant debt of gratitude for the prudence, the sagacity and the energy they manifested, and with entire truth we may say, they labored and we have entered into their labors.

As a lecturer and teacher Dr. Gunn was clear and concise, yet sufficiently comprehensive, especially in emphasizing well established principles as the true and only basis on which the practice could be successfully built and directed. As an operator he was bold and brilliant, yet all the while he manifested a just conservatism, which he inculcated as the highest and most useful function of the surgical art, and which he claimed as the main strength and ornament of the surgery of to-day as compared with that of the past. His work in the operating amphitheatre, at times almost dramatic in tone and general effect, was emphasized by a most commanding presence and a courtly address and manner, sometimes considered as hateur or studied reserve. Acquaintance, however, soon dispelled this error, and it may be well questioned whether the impressions left on the minds of his pupils and hearers were not in fact more lasting and instructive than they might have been under less sharply outlined conditions and surroundings. He left no systematic or extended work as a contribution to the literature of surgery, for which his exceptionally large and varied experience and his skill and attainments seemed to qualify him, as to justify the often asserted expectations of many of his pupils of such a work. In his fugitive essays, however, he contributed many and valuable papers and reports of rare and important cases to the periodical medical literature of the day; and in the various medical associations, national, state and local, in which he was an enthusiastic worker, he left on record opinions, comments and criticisms of great value to his immediate associates and the profession at large.

To the mourning and afflicted family we can only extend our sincere and heartfelt sympathy, realizing as we do full well that when so great a sorrow and bereavement as this casts its dark and forbidding shadow athwart the pathway of one's life, that worldly consolations are of little avail, and that comfort and support can only come from reliance upon that higher power whose wisdom and beneficence we may not always clearly discern, but we dare not question or deny, and to whose inevitable decrees we must submissively bow.

F. A. Campbell, M. D., Secretary Medical Department.

THE SALE OF MORPHINE BY DRUGGISTS.

To the Editor of The Physician and Surgeon.—*Sir:* I herewith transmit you a very excellent statute passed by the Assembly and Senate of the State of New York, June 27, 1887.

The statute aims at preventing poisoning by narcotics, and also protects physicians and surgeons from "prescription peddlers."

You will serve the medical men of Michigan by publishing the act and by advocating its passage in Michigan.

L. G. Doane, M. D.,
No. 352 West 28th Street, New York.

CHAP. 636.—AN ACT TO REGULATE THE SALE OF MORPHINE BY DRUGGISTS AND APOTHECARIES IN THIS STATE.

Passed June 21, 1887; three-fifths being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. From and after the passage of this act no pharmacist, druggist, apothecary, or other person shall re-fill more than once prescriptions containing opium or morphine or preparations of either in which the dose of opium shall exceed one-fourth grain or morphine one-twentieth grain, except with the verbal or written order of a physician.

§ 2. Any persons violating the provisions of section one of this act shall be deemed guilty of a misdemeanor, and shall, upon conviction thereof, be fined not less than ten dollars nor more than twenty-five dollars, in the discretion of the court, for each and every such offense.

§ 3. This act shall take effect immediately.

STATE OF NEW YORK, } ss.:
OFFICE OF THE SECRETARY OF STATE, }

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

FREDERICK COOK, Secretary of State.

EDITORIAL PERISCOPE.

OUR EFFORTS AND INTENTIONS.

This is the last number of the ninth year of the publication, and it completes the ninth volume, of THE PHYSICIAN AND SURGEON. It may be gratifying to our friends and patrons to know that it has been an eminently successful year. During it we have given our readers more original matter than any preceding one. They have had the benefit of a large number of original articles of the highest merit, written by the foremost teachers and practitioners of this country. The progress in medical thought and practice has been represented in carefully selected translations and abstracts made from the leading foreign and domestic medical journals.

The management feel that their efforts have been appreciated by the profession, and the reciprocal appreciation will be seen in their continued endeavors to give the practitioner what is practical and of every-day service.

The physician who is well employed in actual practice, wants in his medical literature, thoughts prepared for immediate application. Short, crisp paragraphs, "creamed" thoughts, practical truths, are the kinds of the materials that will continue to be furnished by this journal.

In order to provide a possible wider range and greater facility for publishing the great diversity of medical contributions, the "make-up" of the journal will be considerably modified. The departments will be arranged to give greater space to the publication of facts and observations that have been of value to the physician in his practice.

The medical press, through the ease and rapidity with which it is able to distribute knowledge, has in a great measure, supplanted the weekly and monthly society meetings of physicians; but, while the medical press is largely responsible for the decreasing interest taken in these societies, it fails in one prominent particular to substitute the meetings. It fails to supply the interchange of the personal bed-side experience by not collecting and publishing such material.

This defect in medical journalism is due solely to the difficulty of the physician to make immediate note of his observations, and the consequent failure to write up an accurate statement of them months afterwards. In order to assist our readers to record and report observations, thereby deriving a mutual benefit far in excess of that afforded by society meetings, we propose to furnish them with a conveniently arranged blank-form, upon which the salient features of special cases can be rapidly recorded.

If these are used and returned to us, the notes will be put into form for publication, and from the publication of these case-records THE PHYSICIAN AND SURGEON will have formed the association with the busy every-day doctor that has long been the desire of its management.

DIABETES.

In the Medical Section of the Ninth International Medical Congress Dr. F. W. Pavy, of London, spoke without manuscript on the subject of diabetes. The following is an abstract of a report of his remarks:

He said that diabetes has always been considered an inscrutable disease, but that its nature may be expressed in precise terms, without entering upon theoretical questions, as a faulty disposal or assimilation of certain elements of food. Food may be divided into three classes: nitrogenous, fatty, and the carbohydrates; and it is the latter group, without distinction between its members, that is the subject of faulty disposal in diabetes. In health an ingested carbohydrate is lost sight of, and we may assume it is transformed for utilization by the economy. In diabetes it is eliminated as sugar, and in proportion to the carbohydrate ingested. The sugar reaches the general circulation in a way it ought not to. In health there is but a trace in the general circulation, so that the ingested carbohydrate is stopped on its way, while in diabetes it exists in large quantities in the general circulation, whence it is removed by the kidneys. And the proportion in the urine is the proportion in the blood. Why it gets into the blood is the essential question. The liver is the assimilative organ and stays the carbohydrate in its progress. People who eat much of the carbohydrates grow fat, as do the lower animals when fed on them. So that the liver seems to be really rather a steatogenetic than a glycogenetic organ. The carbohydrate, changed first into glycogen and then into fat, passes away from oxidation rather than toward it. In diabetes there goes on a faulty chemical process in the liver and a wrong condition of the blood of the portal vein. The liver has a comparatively small supply of arterial blood, but a larger supply of venous blood. When it does not have good venous blood, there is sugar in the urine, as shown by injecting arterial blood into the portal vein, or when the blood of the system is over-oxidized, as shown by the respiration of oxygen or carrying on respiration to excess. To produce a similar condition, we need only a vaso-motor paralysis of the vessels of the chylopoietic viscera. If the arteries of the abdominal viscera are dilated and allow the passage of more blood than can be dearterialized, than the portal vein gets imperfect venous blood, and this permits the carbohydrates, charged with glycogen, to pass through the liver into the general circulation. The vaso-motor paralysis may extend beyond the chylopoietic viscera. For example, the worst forms of diabetes in the speaker's practice were those accompanied by an intense redness of the mouth, tongue, etc. It is well known that puncture of the floor of the fourth ventricle causes glycosuria in the same way, as does also vision of the sympathetic. In the speaker's opinion, diabetes was a disease of a neurotic nature, as he had found that nerve conditions, as well as food, influenced the patient, and nerve conditions might affect the chylopoietic viscera.

Differences of opinion as to diagnosis, depend sometimes on the relation of glycosuria to diet, and sometimes upon error in the test. The best is with copper, but Fehling's solution is liable to get bad from keeping, and the potash fixes the stopper in the bottle. Its ingredients (copper, Rochelle salt, and potash), can be made, however, in anhydrous form in a pellet, and used just like the solution. In a well-stoppered bottle they keep forever, and if moisture does affect them, they get so bad and black as to be evidently useless. But we are still in the dark unless we know the amount of sugar. One needs two specimens, one of the urine passed on retiring at night, and one on rising in the morning. These will enable us to detect errors of diet, even the meal at which carbohydrates were taken, and sometimes even call attention to unconscious mistakes in diet. For example, blanc mange, properly made with galatine and cream, has caused glycosuria by being made of corn starch. The quantitive estimation needs to be easily and accurately done, and the ordinary means, by Fehling's solution, can be greatly improved upon by making an ammoniated solution, which permits the reduction but not the precipitation of the copper; therefore, the exact moment when the blue cupric solution is decolorized can be plainly seen, not being obscured, as in the ordinary method, by the precipitated suboxide. Sometimes albuminuria is present. At first it may be considerable, but under the dietetic treatment usually disappears. This suggests a test for albumen. The most convenient one consists of two pellets, one of citric acid and the other of ferrocyanide of sodium. Dissolve the citric acid in the suspended liquid, and there may be a precipitate (usually uric acid), which disappears on dilution. Then dissolve the ferrocyanide pellet, and there is a precipitate if albumen is present. Nothing else is needed. The test is very delicate, and the precipitate is caused by nothing else but albumen.

There are many grades of the disease, varying in intensity. A healthy person, fasting, may consume an excess of carbohydrates and then have glycosuria. The first in the diabetic process occurs when the assimilative powers are a little below par; it may reach a state where sugar is excreted without the ingestion of any food, sugar being formed from the body itself. The severest cases are in the young. The older the patient the better the prognosis. *No* disease of the young is graver. The speaker never knew a young diabetic recover. The ordinary duration in a young person is two years. In the middle-aged or the old, it is their own fault if they go wrong. It is common from forty to sixty, which was the age in fifty-five per cent. of the speaker's one thousand three hundred and sixty cases. It may go on for some time unrecognized, which is shown by the presence on cast-off clothing of the white spots diabetric urine leaves. It runs in families in a marked manner. The speaker instanced a case where four out of five children had it, the mother and grandmother having died with it. In elderly diabetic patients there are often pains in the legs, more or less ataxia, hyperæsthesia, and paræsthesia of the skin, tender flesh, aching bones,—apparently a peripheral neuritis. In the young the progress of the disease can merely be stayed, there is no cure. There may be under treatment great temporary improvement, but the disease is progressive nevertheless. The sugar, if for a while absent, reappears and goes on increasing. The thirst and polyuria may even yet be checked, but the disease goes on, something throws the patient off his balance, and he dies with diabetic coma. It is quite different, however, after the middle period of life. Here, then, are two points to be looked to—not to feed the disease, and to correct the wrong assimilative action into the right one. The regulation of the diet is an absolute necessity. This is easy enough in some ways, but hard in others. Any animal food will do: meat, fish, game, eggs, butter, cheese, milk sparingly. As to bread—brown bread usually has plenty of starch; gluten bread may be palatable, but is apt to be largely starch. Probably bread made from almonds which contain only seven to eight per cent. of fat is best. To alter the assimilative functions, nothing seems so good as some form of opium, morphia or codeia. The speaker used them and believed them to have a restraining influence upon the disease. After a few months of freedom from glycosuria, the speaker allowed the patients two ounces of bread per diem. If this were well borne, after a while he increased it to three ounces, then to four and one-half, then to six, and then after a longer interval they often returned to ordinary diet, and had no glycosuria. Sometimes, however, with the restoration of bread, the glycosuria returned. It is to be remembered that the diabetic patient has an aptitude for any disease. If this condition is neglected, life is gradually sapped.

In reply to questions, Dr. Pavy said that the Jews had a peculiar predisposition to diabetes. It was more common among them, and more amenable to treatment. He was not a believer in acetonæmia. Bromide of arsenic had no value except while it was being taken. Ten or twelve months was the age of the youngest diabetic he had ever seen.

BACTERIOLOGY AND PRACTICAL MEDICINE.

The following interesting survey of the position of bacteriology with respect to medicine is transcribed by the *Lancet* from the *Centralbl. für Bacteriolgie* (No. 18). It appears as an abstract, by Dr. Bujwid, of Warsaw, of papers by Dr. Hoyer in the Polish journal *Gazeta Lekarska*. The author, who was the first to commence working at bacteriology in Warsaw, discusses the changes which medicine has undergone by the study of the parasitic origin of infectious diseases, and arrives at the following results: All researches hitherto undertaken have aimed at learning the excitants of disease; very many of them have been discovered, and many have been profoundly studied, so that the cause of nearly all infectious diseases has been made known; but bacteriology has hitherto confined itself to these limits. Practical medicine in the more limited sense—prophylaxis excepted—has gained very little therefrom, but it may be hoped that the medicine of the future will play quite a different part, in consequence of the deeper knowledge of the various bacteria and their properties. Many purely empirical drugs will be rejected, and in their stead will be employed those which bear directly upon the morbific agent, or which act by strengthening the resistance of the organism. Unfortunately many questions still remain open. We know, for instance, very little of the way in which bacteria influence the physiological life of the organism. We cannot as yet determine why many micro-organisms which are introduced into the body in enormous quantities with water, air, or food do not give rise to derangements, or in what manner the really harmful organisms disappear from the blood or organs of some animals. Of great importance for the practitioner are the facts that similar groups of diseases can be excited by wholly different micro-organisms. Abscesses are produced, for instance, by the action of staphylococcus, aureus and albus, streptococcus pyogenes, micrococcus tetragenus, and others. Erysipelas following wounds depends not only on the streptococcus erysipelatis of Fehleisen but also on other streptococci and micro-organisms. Pneumonia is not only excited by Friedländer's pneumonococcus, but also by other bacteria. Two very similar diseases—cholera asiatica and cholera nostras—arise from two very different kinds of bacteria. There are other facts of still greater importance, such as mixed infections. Rosenbach found many very different bacteria in the same abscess. The same is the case with septic infection of wounds. Similarly, as Wiegandt has observed, a kind of streptococcus is occasionally associated with tubercle bacilli. Dr. Dunin has shown that certain complications of typhus depend on the presence of other bacteria, etc. When all these questions are solved, then our system of diseases will also be changed; we shall then no longer group them according to symptoms, but causes. There still remain many such questions unsolved. We do not know, for example, upon what depend the different results of experiments on animals when we inject small or large quantities of bacteria. Lastly, we also knew very little of the reason why individuality plays so large a part in the manifestation of disease. Very interesting but unexplained is a research pursued by Wysskowitsch. He found that bacteria which had no effect on healthy animals excited diseases in other animals whose organism was slightly deranged. Thus injections of staphylococcus excited endocarditis in animals whose heart valves were injured. When all the foregoing and many like problems are solved, then it will become more easy to employ bacteriology in practical medicine, and then we shall learn to estimate rightly the great value of this new study.

CONDENSATIONS.

CAN A WOMAN CONCEIVE AFTER HAVING HAD GONORRHŒA?—This question is asked in the *Medical Brief.* It says that Dr. Noeggerath, of New York, has advanced the opinion that a woman who has once had gonorrhœa *never afterwards* conceives. Professor Wm. Goodell says that he cannot recall a case in which a woman bore a child after suffering with gonorrhœa.

BLOOD SUPPLY OF THE HEART VALVES.—Under the direction of Professor Waldeyer, the absence of blood-vessels in the valves of the heart has been proven by Dr. Coen. He found that in man and several domestic animals, the aortic and pulmonic semilunar are entirely without blood-vessels, but that the mitral and tricusped valves are supplied, about one-half of their length, by a minute capillary net-work.

INSANITY AND OÖPHORECTOMY—Dr. Leszynsky gives an account of two cases, in which oöphorectomy was performed for insanity. He admits that there may be reflex irritation from a diseased uterus or ovary, but points out the preponderance of psychical causes and criticises the practice of oöphorectomy in the insane, alleging that "the premature and indiscriminate removal of the ovaries in cases of insanity and other neuroses has of late become so frequent and flagrant a procedure as to demand an emphatic protest against such reprehensible measures and such illegitimate practice."

CLUBBING OF TOES IN EMPYEMA.—Two cases of clubbing of the toes, as well as of the fingers, are reported by Dr. Marshall, in the *British Medical Journal.* He regards "clubbing" an indication of general failure in health, which occurs somewhat rapidly. One of the earliest symptoms produced by wasting disease is seen in the hair, which becomes lank and long. Coincident with the latter, in empyema and tuberculosis, is a modification in the growth of the nails—another epidermal structure. It is singular that when more important structures are failing, these epithelial structures should grow inordinately.

THE VITALITY OF TUBERCULAR VIRUS.—In a paper at a recent meeting of the Académie de Medécine, M. Galtier concludes that tuberculous virus retains its activity in water, in putrefied matter, and on the surface of objects, in spite of desiccation, of variations of temperature, and even of freezing; therefore the excretions of phthisical patients and tuberculous animals are a source of continual danger. He urges the necessity of insisting on the complete disinfection of all objects that have been soiled by tuberculous animals, of their excretions, of the places occupied by them, of their litter and dung, etc., in order to prevent dissemination of the disease and its communication to man.

THE TREATMENT OF PULMONARY CONSUMPTION AT HIGH ALTITUDES.—In an abstract (*British Medical Journal*) of a paper read before the Medical Congress, the author, Dr. Wise, says: 'Putting aside all observations by instruments of precision, there is one unique feature of Swiss mountain climate which must be kept in mind, especially with respect to pulmonary troubles, namely, the possibility of respiring cold, dry air, without the sensation of feeling chilled and pinched by the low temperature. Various explanations have been given for this; the main reason, however, for the immunity from the sensation of cold is the small amount of watery vapor suspended in the air." This dread of a low temperature drives hundreds to the shores of the Riviera, who, he believes, would obtain more amusement and do much better, as regards permanent benefit to their health, in the sunshine of the alps.

TRAUMATIC TETANUS.—A severe case of tetanus caused by the penetration of a nail from the foot sole into the pulp of the great toe is reported by Mr. Milner in the *Lancet.* Chloral and bromide were given in large doses, but the case continued to progress unfavorably, and the patient fast became exhausted. Twelve days after the injury a deep incision was made into the toe around the cicatrix, about one-third of an inch from it, so as to divide the nerves leading to the cicatrix as far as possible. Linseed poultices were then applied. The following day the spasms were decidedly less in severity and frequency. In a fortnight after the incision the chloral was withdrawn and followed by an increase in severity of spasms, showing that the reflex excitability of the cord was still much above the normal. The chloral was removed and gradually withdrawn. The author thinks without the incision death would have been inevitable.

PTYALISM OF PREGNANCY.—The Berlin correspondent to the *British Medical Journal* reports a case described by Dr. Schramin, of a woman, subject for a year and a half to debility, emaciation and a feeling of pressure in the region of the stomach. She was highly emaciated and very anæmic, with red swollen gums. There was free salivation, two pints of saliva being collected in twenty-four hours. Chronic mecurialism was suspected and iodide of potassium was given with but trifling benefit. Atropine produced no better results. After nine weeks' treatment, it was found that she was at about the sixth month of pregnancy; galvanism and pilocarpin injections did not diminish the secretion of saliva. Lastly bromide of potassium was administered, when the flow of saliva gradually ceased. The solid constituents of the saliva were remarkably scanty, but Dr. Schramin found that ptyalin was absent from the saliva, which was rendered useless for the discharge of its digestive functions, which evidently caused the emaciation.

POSTURE FOR AND IN SLEEP.—The posture voluntarily or instinctively assumed during sleep, is not generally the one most favorable to sleep. It is impossible to ascertain either by experience or observation which is the posture most conducive to sleep, and attempts to lay down rules for the guidance of bad sleepers are always arbitrary, generally empirical, and rarely of practical value. Some, who think that the blood must be drained from the brain to promote sleep, will recommend that the head must be raised; others believe that somnolence depends upon a passive congestion, and will have the feet raised and the head lowered. There is evidently some change in the blood current during sleep, and common sense should teach us that sleep is best promoted when the flow of blood is least interfered with. The head should lie in such posture that it cannot offer any obstacle to the free return of the blood through the veins of the neck, and does not tend to make the blood flow especially in any particular direction, but leaves nature at liberty to act unrestrained.

Time Required for Digestion of Articles of Diet, Chemical Incompatibilities, Antagonisms, Thermometry, Respiration, Abbreviations, Asphyxia, Rare Synonyms, Table of Signs. The ruling of the call-list pages permits the keeping of all accounts and remarks on one double page. The ruled pages for various other purposes are compact and convenient. The work contains many excellent features and merits the popularity that it must soon attain.

THE CREMATION OF THE DEAD, CONSIDERED FROM AN ÆSTHETIC, SANITARY, RELIGIOUS, HISTORICAL, MEDICO-LEGAL, AND ECONOMICAL STAND-POINT. By Hugo Erichsen, M. D., Licentiate of the Royal College of Physicians and Surgeons of Kingston, Canada; Member of the Committee of Organization of the First International Crematory Congress; Corresponding Member of the Cremation Societies of New York and Berlin; Foreign Associate Member of the Hygienic Society of the Crematory of Milan, Italy, etc. With an Introductory Note by Sir T. Spencer Wells, Baronet, F. R. S., late President of the College of Surgeons of England; Surgeon to the Queen's Household, etc. Illustrated. 12mo: two hundred and sixty-three pages. Detroit: D. O. Haynes & Company, 1887.

The scope of this work is clearly set forth in its title. In it the author appeals to the general public to remove the evils that result to the living from burying the dead in the earth, by substituting cremation. In his preface the author encouragingly states that: "The period of fierce and fanatic opposition to cremation has passed, and made way for a calm consideration of the subject." Dr. Erichsen, however, fully realizes that in a question where sentiment has to be changed, there remains much to do, even after "fanatic opposition" has been removed. There is needed a diffusion of knowledge on the subject, in order to educate the populace. To aid in the accomplishment of this, the author has written this work. Scientists who are interested in sanitation appreciate the great importance of having the great dangers of interment removed. In his introduction to this work, Sir T. Spencer Wells says: "I have great pleasure in doing the little that is in my power to assist in bringing a very important question of sanitary reform before a thoughtful, intelligent and advancing nation." Dr. Wells states that in his country "it is the highest classes, in the sense of the best educated clases, who are most earnest in their efforts to disseminate that branch of knowledge or science which, in the words of *Parkes*, aims at rendering 'youth most perfect, decay less rapid, life more vigorous and death more remote.'" "*Parkes* is dead but he still speaks to us by his book," continues Sir Spencer, "and he says:

"'The disposal of the dead is always a question of difficulty. If the dead are buried, so great at last is the accumulation of bodies that the whole country round a great city becomes gradually a vast cemetery. After death, the buried body returns to its elements. If, instead of being buried, the body is burned, the same process occurs more rapidly. A community must always dispose of its dead, either by burial in land or water, or by burning, or chemical destruction equivalent to burning, or by embalming or preserving. The eventual dispersion of our frame is the same in all cases. Neither affection nor religion can be outraged by any manner of disposal of the dead which is done with proper solemnity and respect to the earthly dwelling-places of our friends. The question should be entirely placed on sanitary grounds. Burying in the ground appears certainly to be the most insanitary plan.'" Dr. Erichsen separately considers the subject of cremation from the various stand-points indicated in the title. After reading the work one is at a loss to understand why the opposing sentiment is not changed and cremation adopted as the usual mode of disposing of the dead, instead of the rare exception. The argument is not the expression of his own views in its favor, but he quotes earnest declarations advocating it from eminent members of the theological, legal and medical professions.

MEDICINE AND MEDICINE MEN. Anniversary address delivered at the banquet of the Louisville Medical Society, May 26, 1887. By John Godfrey, Surgeon M. H. S. Louisville: John P. Morton & Company, 1887.

The professional work of a physician is of the class "matter-of-fact." His thoughts are led through the channel of reason; his conclusions are drawn from premises that bear the close relationship of cause and effect; the mental balance wheel, "the reason" thus constantly governing his thought; a physician may be a poet born, but the imagination is not permitted to feed the spark of genius. To this there are exceptions which only strengthen the rule, and the orator at the banquet of the Louisville Medical Society is notably such. To confirm this opinion we quote the introduction of his anniversary address:

MR. PRESIDENT AND GENTLEMEN.—If you possessed omniscient ken, and saw beneath the outward show of seeming calm, that hides the glow of hope and doubt that tingles through my anxious heart, I know thus you unasked would gladly shed on me your sympathies in full degree; for grave misgivings and unrest, that honest pride and joy combined, awake a tumult in my breast, at thought that I have been assigned for this one time, by fate or chance—or was it your fine complaisance?—the august *rôle* of orator. In answer to our written law, some one of us must occupy this honored post and edify, as best he may, each mind and heart of those that serve the healing art.

HOW WE TREAT WOUNDS TO-DAY. A Treatise on the Subject of Antiseptic Surgery which can be Understood by Beginners. By Robert T. Morris, M. D., Late House Surgeon to Bellevue Hospital, New York; Member of Linnæan Society of Natural History, New York; Member of New York County Medical Society; Consulting Surgeon to the Woman's Hospital of Brooklyn. Second edition. Royal 12mo: one hundred and sixty-five pages. Cloth, $1.00. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1887.

The title of this little work insured its success. The rapid sale of the first edition shows that the author aimed well. The physician receives just the kind of information he most wants, a clear, true description of the applications of the "antiseptic system" in every-day surgery. The different varieties of wounds are separately considered, and the antiseptic treatment of each minutely described. The little details that are given for the preparation of dressings, their cost, where they can be purchased, etc., remove many of the difficulties that otherwise would prevent the general practitioner adopting the antiseptic method of dressing wounds. Dr. Morris is to be congratulated upon the successful manner in which he has accomplished his purpose.

THE MEDICAL NEWS VISITING LIST FOR 1888. Thirty patients per week. Pebbled morocco and gold, $1.25. Philadelphia: Lea Brothers & Company, 1887.

The Medical News Visiting List for the coming year appears with all its former elegance, and thoroughly revised, to bring it up to date in every respect. In beauty and richness of binding, it is a masterpiece. The text portion contains the following data, some portion of which the physician will daily want to consult: How to keep Accounts; How to keep the Visiting List; Table to find day of Confinement; Signs of Pregnancy; Signs of Dentition; Weights and Measures (ordinary and metric); Comparative Scales; Examination of Urine; Disinfectants; Table of Eruptive Fevers; Some Remedies not yet in common use; Incompatibles; The Heart Sounds; Artificial Respiration; Poisons and Antidotes; Table of Doses; Therapeutic Table; Ligation of Arteries. Some of these features are peculiar to the News Visiting List, notably: The engraving of the thorax, with which are given the location of the heart sounds; the therapeutic table prepared by Dr. T. Lander Brunton, which contains the list of diseases arranged alphabetically, giving under each a list of the prominent drugs employed in the treatment; a concise description of the operation for the ligation of all the principal arteries, accompanied with a plate which indicates the position in which the operation of ligating an artery in its continuity is most commonly performed.

The account and record pages provide for the daily record of patients; Clinical Record; Consultation Practice; Obstetric Engagements and Practice; Vaccinations; Deaths; Addresses of Patients; Addresses of Nurses; Cash Account. In these some changes have been made, at the suggestions of members of the profession, where, from experience in its use, a gain in convenience could be effected. Three styles of the list are now published; weekly (dated for thirty patients); monthly (undated for one hundred and twenty patients per month); and perpetual (undated). Each style is in one volume, and at the uniform price as above stated. When ordered, a Ready-Reference Thumb-letter Index is furnished, at an additional cost of twenty-five cents. This is a feature peculiar to this visiting list, and will be found to effect a great economy of time during a year.

EARTH AS A TOPICAL APPLICATION IN SURGERY. Being a full Exposition of its Use in all the Cases Requiring Topical Applications Admitted in the Men's and Women's Surgical Wards of the Pennsylvania Hospital During a Period of Six Months in 1869. By Addinell Hewson, M. D. Second edition, with four photo-relief illustrations. 12mo: three hundred and nine pages. Cloth, $1.00. Philadelphia: The Medical Register Company, 1887.

This is the second edition of a work first published in 1872, by Dr. Hewson, in which was published the results of the use of earth as a surgical dressing in all the cases requiring topical applications admitted to the Men's and Women's Surgical Wards of the Pennsylvania Hospital during a period of six months in 1869. Since that time the author has continued his studies with the most gratifying results. The work consists mainly of a description of a large number of cases, from which deductions are drawn, based upon the direct effects attributed to the use of the earth dressing. These comments consider the effects as to the contact of the earth with the part; the effects on the pain naturally incident to the cases; its power as a diodorizer; its influence over inflammation; its influence over putrefaction; its influence over the healing process.

The work closes with a lengthy discussion on "Its *Modus Operandi.*" The author's arguments go to show that the results are dependent almost wholly upon the chemical influences exerted by the diverse chemical ingredients of the earth.

The labors of Dr. Hewson virtually established the great merits of dry earth as a surgical dressing, and since he gave his results to the profession, many surgeons have verified its usefulness.

ELEMENTARY MICROSCOPICAL TECHNOLOGY. A Manual for Students of Microscopy. In Three Parts. Part I: The Technical History of a Slide, from the Crude Materials to the Finished Mount. By Frank L. James, Ph. D., M. D., President Saint Louis Society of Microscopists; Member of American Society of Microscopists; Editor *Saint Louis Medical and Surgical Journal.* Octavo. Cloth. Saint Louis, Missouri: Saint Louis Medical and Surgical Journal Company, 1887.

This little work was prepared especially for the beginner. In the multitude of details, which constitute the technics of microscopical study, nothing is taken for granted. The manipulations and processes are considered separately, and each step in the work, from the preparation of the crude material to be examined, to the finished slide is taken up progressively. From his own experience, he having slowly worked out these problems without a teacher, the author fully realizes the difficulties which constantly beset and discourage the beginner, who undertakes microscopical work without an instructor. The sole object of this work is to remove these difficulties, and those who use it as a guide will never know how perfectly that object has been attained.

THE VEST POCKET ANATOMIST (founded upon Gray). By C. Henri Leonard, A. M., M. D., Professor of the Medical and Surgical Diseases of Women in the Detroit College of Medicine. Thirteenth revised edition, enlarged by Sections on Anatomical Triangles and Spaces, Herniæ, Gynæcological Anatomy and Dissection Hints. Cloth, eighty-six illustrations, one hundred and fifty-four pages, post-paid, 75 cents. Detroit: The Illustrated Medical Journal Company, 1887.

The popularity and merits of this little work are shown in the demand which called for a thirteenth edition.

LITERARY MENTION

BOOKS.

"Transactions of the Association of American Physicians." Second Session held at Washington, District Columbia, June 2 and 3, 1887. Philadelphia: Printed for the Association, 1887.

"A Manual of Organic Materia Medica." Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the Use of Students, Druggists, Pharmacists and Physicians. By John M. Maesch, Ph. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Third edition, with two hundred and fifty-seven illustrations. 12mo: five hundred and thirty-two pages. Cloth, $3.00. Philadelphia: Lea Brothers & Company, 1887.

"Text-Book of Therapeutics and Materia Medica. Intended for the Use of Students and Practitioners." By Robert T. Edes, A. B., M. D., Fellow of the Massachusetts Medical Society, of the American Academy of Arts and Sciences; Member of the Medical Association of the District of Columbia, of the Association of American Physicians and Pathologists, of the American Neurological Association; Corresponding Member of the Boston Society for Medical Improvement, formerly Passed Assistant Surgeon, United States Navy; Professor of Materia Medica and Jackson Professor of Clinical Medicine in Harvard University; one of the Visiting Physicians to the Boston City Hospital. 8vo: five hundred and fifty-two pages. Cloth. Leather. Philadelphia: Lea Brothers & Company, 1887.

"A Complete Hand-Book of Treatment." Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and containing nearly one thousand Formulas, by William Aitken, M. D. (Edinburgh), F. R. S., Professor of Pathology in the Army Medical School; Examiner in Medicine for the Military Medical Service of the Queen; Fellow of the Sanitary Institute of Great Britain; Corresponding Member of the Royal Imperial Society of Physicians of Vienna; and of the Society of Medicine and Natural History of Dresden, etc. Edited with Notes and Additions. By A. D. Rockwell, A. M., M. D., Late Electro Therapeutist to the New York State Woman's Hospital, and Author of Medical and Surgical Uses of Electricity. 8vo: four hundred and forty-four pages. Cloth. New York: E. B. Treat, 1887.

"A Practical Treatise on Materia Medica and Therapeutics." By Robert Bartholow, A. M., M. D., LL. D., Professor of Materia Medica, General Therapeutics and Hygiene, in the Jefferson Medical College of Philadelphia; Physician to the Philadelphia Hospital, and Lecturer on Clinical Medicine in the Same; Fellow of the College of Physicians; Member of the American Philosophical Society; Honorary Member of the Societe Medico-Practiques de Paris, and of the Ohio, New York, Connecticut and Texas State Medical Societies, and of the American Neurological Association, etc. Author of a Treatise on the Practice of Medicine; of a Treatise on Medical Electricity; of a Manual of Hypodermatic Medication, etc. Sixth edition, revised and enlarged. 8vo: eight hundred and two pages. Cloth. New York: D. Appleton & Company, 1887.

"Anatomy, Descriptive and Surgical." By Henry Gray, F. R. S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at Saint George's Hospital Medical School. The Drawings by H. V. Carter, M. D., Late Demonstrator of Anatomy at Saint George's Hospital, with Additional Drawings in Later editions. Edited by T. Pickering Pick; Surgeon to, and Lecturer on Surgery at Saint George's Hospital; Senior Surgeon, Victoria Hospital for Children; Member of the Court of Examiners, Royal College of Surgeons of England; A New American, from the Eleventh English edition; thoroughly revised and re-edited, with additions. By William W. Keen, M. D., Professor of Surgery in the Woman's Medical College of Pennsylvania; Professor of Artistic Anatomy in the Pennsylvania Academy of the Fine Arts; Formerly Lecturer on Anatomy in the Philadelphia School of Anatomy; Surgeon to Saint Mary's Hospital; Fellow of the College of Physicians of Philadelphia, etc. To which is added Landmarks, Medical and Surgical. By Luther Holden, F. R. C. S., with additions by William W. Keen, M. D. Cloth, $6.00. Full Leather, $7.00. In Color, $8.25. Philadelphia: Lea Brothers & Company, 1887.

MEDICAL DIGEST.

COCAINE ANÆSTHESIA DURING LABOR.

The following experience in the use of local anæsthesia during parturition is reported by Dr. Keester, in the *Virginia Medical Monthly:*

The patient was a primipara of twenty-eight, whose general health was below par, and whose nervous system was almost exhausted from dread of the pending labor. The membranes had prematurely ruptured. She had been in labor about twelve hours, and with each pain a discharge of water followed. The pains were rapidly growing stronger, but were not very effective in dilating the os. The patient had become so nervous and weak that I had to resort to chloroform to keep her from going into convulsions. I kept her partially under its influence until the os had fully dilated. I had, up to this time, given about four ounces of Squibb's chloroform, besides a considerable quantity of chloral and morphine.

The patient was rapidly growing weaker and the pains growing stronger, and I feared she could not stand very much more chloroform. So I decided to try local anæsthesia by applying a preparation cansisting of two parts of a four per cent. solution of hydrochlorate of cocaine to six parts of pure glycerine, to the vaginal walls. I made the applications with a vaginal syringe and a small piece of soft surgeon's sponge. Before making the application, I washed out the vaginal canal thoroughly with a six per cent. solution of carbolic acid and tepid water. I made five applications, allowing from twelve to twenty minutes intervals. After the third application, I left off the chloroform. The head of the child had descended into the vagina when I made the first application. I also applied the mixture to the perineum and vulva. The expulsion pains were long and severe, but the patient bore them without any chloroform, save a whiff or so occasionally to partially relieve the tension of the perineum.

Notwithstanding the large head of the child, the labor terminated favorably, and without any laceration, save a slight rent in the anterior wall of the vagina, which readily healed under the antiseptic wash that was prescribed for the vagina. The patient made a good recovery. I feel justified in stating that in my judgment the patient would not have survived her long and tedious labor had it not been for the local anæsthesia.

RAPID DILATATION OF THE CERVIX.

A paper on this subject by Dr. Wathen, of Louisville, read at the ninth International Medical Congress, called forth a most animated discussion. The author stated his predilection in favor of this operation by means of steel dilators, especially in the treatment of dysmenorrhœa and sterility. Tents of all kinds were believed to be more or less unsafe, and a two-bladed instrument was preferred to bougies or any other form of instrument for this purpose. The operation should always be done with the greatest regard to antisepsis, and in case the dilatation is to exceed three-quarters of an inch, general anæsthesia to a moderate degree should be first produced. The form of dilator which he used had parallel blades which were thickened at the tips, and enabled one to dilate as thoroughly at the os internum as at the os externum, the blades not giving or springing, and thus producing unequal dilatation, as is too apt to be the case with such instruments as Goodell's, for example. He considered that this method of operation could be substituted for other means in almost every case in which dilatation is indicated.

Dr. A. Martin, of Berlin, in opening the discussion, sketched the development of the idea of dilatation since it was first propounded by Simpson, forty years ago, and alluded to the great changes which had occurred to the operation during that period. He quite approved of the author's idea of making the dilatation ample at the os internum, if it were done at all. For himself, however, he did not see the necessity of doing the operation frequently. The womb could be explored after slight dilatation, perhaps with the finger, and the curette could then be used if the question were one of diagnosis as to the character of the endomentrium. He sometimes had occasion to divide the cervix with a knife, after which the interior of the organ could be explored, and the wound then closed as in the ordinary Emmet operation. Dr. Weeks, of Portland, Maine, thought the operation contraindicated in cases in which there was faulty condition of the ovaries and tubes. It was not an operation which was devoid of danger. He had lost a patient who was seized with acute peritonitis on the fourth day after a second operation for dysmenorrhœa. Dr. Reed, of Ohio, deprecated the general advocacy of this method of treatment. Dr. Goelet, of New York, thought the great end to be attained was to produce dilatation to a certain degree, and then retain it by the use of a stem pessary for a sufficient length of time. Dr. Trenholme, of Montreal, laid stress upon the statement that those cases were not suitable for operation in which there was either uterine congestion or any disease of the tubes or ovaries. The patient should be examined just after menstruation is ended, and if any of these conditions are found no operation should be done. After the operation he approved of the use of a curved stem. Dr. Glisan, of Portland, Oregon, had always obtained satisfactory results from the operation, and without especial attention to antisepsis. Dr. Reeves Jackson, of Chicago, deplored the frequency with which the operation is done. He thought it useless except for purposes of exploration. Dr. Nott, of Texas, believed that the field for the proper performance of the operation was a limited one. Dr. Burns, of Allegheny, Pennsylvania, preferred to dilate the uterus, in proper cases, with hard rubber stems, leaving them in for several days and securing proper drainage. Dr. Balls-Headley, of Melbourne, Australia, still found Sim's operation of posterior section satisfactory in cases of stenosis attended with dyspnœa. He could not understand the great enthusiasm in America upon the subject of rapid dilatation. Dr. Hoff, of Ohio, obtained satisfactory dilatation with tents made of the pith of the cornstalk and wrapped with absorbent cotton. Dr. McBurney, of Detroit, found as the result of a great many measurements upon the cadaver, that dilatation was anatomically unnecessary in most cases, and believed that he accomplished the same result, namely, the relief of congestion, by the use of suitable vaginal applications. Dr. Dorrance, of England, still followed Sims's plan of cutting the cervix from the os internum to the os externum, keeping the wound open by means of a piece of lint laid within it, in those cases which are ordinarily treated by dilatation. During gestation, if it be desired to dilate the cervix, he uses an aseptic sponge tent. Dr. Asdale, of Pittsburg, has never seen any bad results from the operation. He preferred steel dilators to tents. He had often seen sterility relieved by the operation. Dr. Satterlee, of Kentucky, had never had occasion to perform the operation, believing that the same results could be obtained by vaginal applications of hot water. Dr. Wathen, in concluding, stated that he did not hesitate to perform the operation in his office, in suitable cases. He did not accept Emmet's dictum, that there was no such thing as congestive dysmenorrhœa. If Emmet did not believe in the conditions for which the operation was required, he could not consistently do it, hence his opposition to it. He would do the operation only in cases in which equally good results could not be obtained by milder means.—*Medical News.*

TEREBENE.

In the service of Professor Germain Sée, in the Salle Saint Jeanne, Hotel Dieu, Paris, it has recently been found expedient and interesting to make use of some of the newer remedies of day. The visitor, taking up the official book of the ward and looking into recent records, finds written the professor's reports on such little known agents as the sulphate of sparteine, naphthaleine, sulphate of aconitine, convallaramin and terebene. All stand of interest, but among the most interesting of the reports is that which touches upon terebene. Like a new baby, which is most interesting in its mother's arms, so much the same does a new remedy prove in the cradle of its birth. Terebene, of French extraction by way of the item of discovery, comes fairly to commendation from French lips. One would not go to the new baby's mother to seek unprejudiced points of infantile excellence, but rather to an honest neighbor; so, obtaining nothing in the way of points from M. Ribau, the father of the drug, it is honest to seek them from his neighbor, M. See, who has weighed and swaddled the infant drug, and knows an unprejudiced deal about it.

Germain See is a man of few words, and of terebene he simply says:

"Where the diagnosis is of emphysema it is the first of the agents employed. Where it is of peri-uterine phlegmon, its use immediately follows injections. Where it is of albuminuria, it is ever recognized as a worthy remedy."

This is the latest news concerning the drug in France, and may not inaptly be regarded as the French estimation of it other than in its gastric and bronchial application by the Ribau school.

In England Dr. William Murrell has had a good deal to do with the drug in the last fourteen years, and probably knows it better than any other English practitioner, having paid as notable attention to it as to nitro-glycerine. He has brought it into prominence in the treatment of cough, publishing some time since a report of its value in eighty-one out of ninety-four cases, and more recently a supplementary report of its use in one hundred and fourteen cases. The rather indefinite term "cough," to which this authority finds it applicable, is more fully defined as "the consequences of irritation of the different branches of the pneumogastric nerve, the short jerk of cardiac irritation, the heavy bark of bronchial dryness, the tiresome effort of gastric disturbance and the slow dullness of sound that tells of hepatic congestion. Wherever the cough is of this character, the remedy is indicated fully."

Dr. Murrell has a history of more or less bronchial irritation in some of his cases, which he attributes to the use of an inferior quality of the drug. He deems it probable that the failures of those of his countrymen who have "had no success at all with the remedy" were due to the use of these inferior brands. His success in the treatment of acid dyspepsia, "where one of the indications is the stomach cough," has been uniform.

In this country the fault pointed out in England is strikingly apparent. There are several things sold as terebene, but that which is relied upon here in New York is that of McKesson & Robbins, who were the first to manufacture it here. Not only do we have in the market the drug in an inferior shape and form, but the know-it-all druggist in some places is given to the trick of giving terpine hydrate, "just-as-good-if-not-better." Some physicians seem to have fallen into·the habit of receiving this substitution, and it might be well to say that terebene is quite distinct from terpine and terpinol. Terebene, as described by M. Ribau, is a substance produced by the action of sulphuric acid upon turpentine; while turpine is a substance obtained by distillation from turpentine, and terpinol is still another derivative of an oily nature. It is true that the two are both expectorants, but not interchangeably so. As the worthy Amende says of a sporting matter, "one can kill a woodcock with either a rifle or a revolver, but the smaller arm is not a substitute for the other in any sense." So terpine will remedially affect cough, but it requires a dose of five centigrammes to perform that which five drops of terebene undertakes. Yet we meet physicians who do not know the one from the other.

What of American experience with this drug?

Quite as a matter of course the remedy has its unbelievers, but it is encouraging to note that the skeptic's strongest point against it is contained in the plaint which I take from the words of a recent writer:

"Such remedies as naphthol, terebene, etc., cannot come to popularity, because of their lack of palatability. The average palate will have naught to do with kerosene, petroleum or turpentine, and appetite dispenses with their products."

There is no "amen" constructed to fit such nonsense. Terebene is being used as an inhalation, or internally. Not one patient in ten will object by palate to a dose of five drops, on sugar, every four hours, gradually increasing to twenty drops. If there is a rebellion against this dosage the following formula produces a good mixture:

℞. Terebene	1 part.
Glycerine, spt. vini rect., syrup simpl.	āā 15 parts.

M. Ft. mist. A dessertspoonful for a dose.

The physiological actions of the drug show a terebinthian uniformity. There is a quick recognition in the breath, urine and sweat; a suffused feeling of warmth and exhilaration; a direct action on the respiration. Elimination having to do so intimately with the bronchial tubes, kidneys and the sudorific glands, it follows that there is no need to mistake the theraphy, though not urging a confinement to expectorant, renal and diaphoretic effects.

Either alone or in approved expectorant mixtures, terebene is more particularly indicated when the sputa are notably tenacious.

Its employment in bronchial catarrh, ordinary colds and capillary bronchitis are made evident. Not many American physicians do other than to agree with Murrell, that "whatever the affection of the broncho-pulmonary mucous membrane, acute or chronic, terebene is beneficial. When great depression exists in pneumonia there is nothing more counteractive than a combination with chloride of ammonium. Few agents exercise a more gratifying influence on the cough of phthisis. Emphysema, hay fever and pulmonary sclerosis are other affections in which terebene is capable of effecting a considerable degree of amelioration. By inhalation, laryngeal and bronchial diseases seek no more efficient treatment. On the whole, it seems to be the invariable opinion of all who have used the remedy, that there is nothing in the professions of Dr. Murrell which cannot be substantiated.

In hydro-nephrosis and pyo-nephrosis as much confidence may be had in terebene as in any agent in the materia medica. Irritability of the bladder is also relieved, and there has been testimony in its favor in dropsy.

There is also evidence in its favor in chronic intestinal catarrh, perhaps a natural circumstance to its serviceability in acidity of the stomach and dyspepsia. No remedy is of more use in the so-styled irritative dyspepsia, where it is a substitute without measure for Fowler's solution. In the flatulent dyspepsia that is an accompaniment to obesity, its use is attended with invariable advantage.

If I might venture an opinion, it would be that in its particular field as an expectorant there is no new remedy that stands in advance of true American terebene. I say "true American," not only for the reason already named, but also because the products of our American turpentine are very preferable to those of the European article, chemically and therapeutically.—Dr. Morse in *New Orleans Medical and Surgical Journal.*

THERAPEUTIC PROGRESS.

ANTIPYRIN.—Dose from seventy-five to ninety grains, divided into three doses, one of which to be taken every hour.

OSMIC ACID.—Best administered in pill form (made up with Armenian bole). The dose is one-sixtieth grain, which may be repeated several times a day.

BORIC ACID.—This may be dissolved in five times its weight of water by the intervention of a little magnesia. The proportions are: magnesia usta, two parts; boric acid, thirty-one parts; water, one hundred and fifty parts.

TINCTURE OF CAPSICUM FOR THE CURE OF STYE.—Dr. Axford, of Texas, reports that the application of tincture of capsicum, made by a sharp pointed piece of wood to the center of the stye, will remove the pain and produce a cure.

FLUID EXTRACT OF ERGOT AS A LOCAL APPLICATION IN ERYSIPELAS.—Dr. Snyder, of Chicago, has found the local application of ergot a valuable remedy in erysipelas. The application is made every three hours, washing the parts with clear water before each use of the drug.

TERPIN.—M. Vigier presents the following formula:

℞.	Terpin	50 centigrams.
	Alcohol	2 grams.
	Glycerine	4 grams.

This mixture keeps indefinitely.

QUEBRACHO FOR FROST BITES.—The application of the fluid extract of quebracho is recommended for frost-bitten extremities, burns and ulcers. It is stated that in half an hour it has dried, forming a tough, adhesive crust, under which the formation of new skin progresses rapidly.

ANTIPYRIN IN WHOOPING-COUGH.—Dr. Sonnenberger recommends antipyrine in whooping-cough, regarding the drug theoretically indicated in this disease. It is best given in doses of one grain to infants, seven and one-half grains to well grown children, and fifteen grains to adults, repeated three times a day in combination with syrup of raspberries.

For Paroxysmal Sneezing.—Dr. Richardson prescribes the following in cases of paroxysmal sneezing: A lotion composed of one part of hydrochlorate of cocaine, one of carbolic acid, and one of essence of camphor to two drachms of water, to be syringed up the nostril each morning with a double ball syringe.

Methylal.—This compound has decided anæsthetic and hypnotic properties. Its action is purely somniferous, and its impression on the brain is evidently temporary. It does not cause depression nor disturbance of the nervous or nutritive systems. The ordinary dose in cases of dementia ranging between three and five grams, though larger doses may be given.

Carbolate of Mercury in Syphilis.—Dr. Schadeck employs carbolate of mercury internally and hypodermically in syphilis with remarkable success. He uses the following formula:

℞. Carbolate of mercury.............................. ʒiij.
Pulverized liquorice, q. s.........................
M. Ft. Pil. No 60.
Sig. Two to four pills daily after food.

Antipyrin in Diabetes.—Dr. Goenner, of Switzerland, has recently tried antipyrin in daily doses of three grams in a case of diabetes of about seven years' standing. The patient was a gentleman aged sixty, with two-eighth per cent. of sugar in his urine. In three days the urine gave but an indistinct Trommer's reaction. Not a trace of sugar remained after the patient had taken twenty-seven grams of the drug.

Chionanthus Virginica as a Diuretic.—The bark of chionanthus virginica has been used in jaundice and liver disorders. There are attributed to it diuretic and diaphoretic properties. Dr. Henning administers the fluid extract:

℞. Fluid extract chionanthus...................... 30 grams.
Water.. 120 grams.
Sig. A teaspoonful every three or six hours.

Iodoform as an Antiseptic.—In a recent paper Dr. De Ruyter confirms the statement that outside the body, when undecomposed, iodoform exerts no antiseptic action, but in the presence of pus at the temperature of the body the iodoform undergoes decomposition. The iodine liberated by the breaking up of the iodoform combines with ptomaines present, depriving these of their harmful properties.

FOR VOMITING OF PREGNANCY.—Dr. Free recommends the following:

℞.	Nitrate of potash	
	Chlorate of potasha, āā	ʒj.
	Tartar emetic	gr.j.
	Tincture chloride of iron	fʒiv.
	Simple syrup, q. s. ad	f℥iv.

M. Sig. One drachm every four hours.

ANTIPYRIN IN MIGRAINE.—Dr. Berthold writes that in Germany treatment with antipyrin has been for some time past very successful. The dose given is half a gram. It is best to give it in the aura. If the patient feels in the evening that she is likely to have an attack, a dose is taken on going to bed, and if symptoms continue in the morning, a second dose is taken, the patient remaining in bed an hour or two. In most cases the attack will be suppressed.

BENZOL IN WHOOPING-COUGH.—The best results from benzol in whooping-cough are obtained by administering it after the acute stage is passed. Dr. Lowe, of England, obviates the effects of the hot pungent taste and its tendency to cause sickness in the following formula:

℞.	Pure benzol	♏xxxij.
	Pure glycerine	℥iss.
	Oil peppermint	♏x.
	Syrup mori	℥ss.

M. Dose, teaspoonful edâ quaque hora sumenda.

AGARICIN FOR NIGHT-SWEATS OF CONSUMPTIVES.—Dr. Joung has used with success in the hospital of Budapest the following formula:

℞.	Agaricin	.50 parts.
	Dover's powder	7.50 parts.
	Gum arabic	
	Pulverized althe., āā	4.0 parts.

M. Ft. Pil. No. 100.
Sig. One to two pills daily.

In this combination the laxative effect of the agaricin is somewhat checked. The action of the remedy is positive. One pill at night is usually sufficient.